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HPDRP02	1052728	779	248 - 670	2954	Pro-12 to Asp-20, Leu-30 to Glu-37, Lys-62 to Asp-70, Met-99 to Asp-109, Ala-115 to Asn-122, Gly-135 to Asp-141.	H0619: 3, H0662: 2, H0135: 1, H0593: 1 and H0658: 1.
HMALJ21	1052874	780	623 - 1033	2955	Gly-9 to Thr-24.	L0789: 4, H0660: 2, S0278: 1, H0250: 1, T0010: 1, H0163: 1, H0551: 1, L0657: 1, L0777: 1, L0755: 1 and L0731: 1.
HLYAR61	1053037	781	120 - 431	2956	Gln-17 to Gly-27, Glu-39 to Asp-52, Lys-79 to Asn-84.	H0341: 3, H0580: 2, S0049: 2, S0422: 2, T0049: 1, H0656: 1, S0222: 1, H0632: 1, H0486: 1, H0581: 1, H0266: 1, H0494: 1, S0438: 1, H0520: 1, H0659: 1, H0704: 1, S0406: 1, L0754: 1, L0747: 1, L0750: 1, L0752: 1, L0757: 1,

HLTCQ80	1053164	782	2 - 562	2957	H0445: 1 and S0276: 1.	8q24	131950, 153840, 600669, 601282, 601455, 602232
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HDTDU67	1053171	783	485 - 697	2958	Ser-9 to Gln-19.	S0028: 1, L0779: 1 and L0731: 1. L0362: 6, H0486: 3, S0406: 3, L0809: 2, S0434: 2, H0624: 1, H0663: 1, S0376: 1, S0360: 1, H0329: 1, S0046: 1, H0586: 1, H0150: 1, L0483: 1, H0096: 1, H0124: 1, H0591: 1, S0422: 1, L0598: 1, L0369: 1, L0763: 1, L0638: 1, L0521: 1, L0662: 1, L0766: 1, L0803: 1, L0776: 1, L0655: 1, L0657: 1, L0659: 1, L0793: 1, L0666: 1, L0665: 1, L0565: 1, H0520: 1, H0519: 1, H0684: 1, H0648: 1, H0521: 1, H0696: 1, L0747: 1, L0779: 1, L0777: 1, L0752: 1, L0758: 1- L0608: 1, H0506: 1 and H0352: 1.
HMABL01	1053173	784	210 - 1289	2959	Ala-1 to Arg-6, Gly-45 to Gly-51, Ser-53 to Lys-69, Asp-89 to Ser-100,	L0493: 10, L0748: 6, L0601: 5, H0615: 4, L0741: 4, H0052: 3, L0774: 3, L0776: 3,

Pro-106 to Leu-117,	L0754: 3, L0749: 3,
His-119 to Gly-124,	S0222: 2, H0318: 2,
Asp-166 to Ser-176,	H0620: 2, S0422: 2,
Ser-293 to Cys-301,	L0500: 2, L0769: 2,
Pro-306 to Cys-313,	L0766: 2, L0375: 2,
Ser-317 to Gln-327,	L0514: 2, L0793: 2,
Arg-332 to Pro-341.	S0126: 2, S6024: 1,
	H0484: 1, H0125: 1,
	H0393: 1, H0586: 1,
	H0497: 1, H0331: 1,
	H0574: 1, L0622: 1,
	H0013: 1, T0082: 1,
	S0010: 1, L0563: 1,
	H0597: 1, L0471: 1,
	H0012: 1, H0356: 1,
	H0328: 1, H0428: 1,
	H0039: 1, T0006: 1,
	H0424: 1, T0067: 1,
	H0487: 1, H0059: 1,
	S0144: 1, S0426: 1,
	L0770: 1, L5575: 1,
	L0768: 1, L0794: 1,
	L0499: 1, L0497: 1,
	L0806: 1, L0805: 1,
	L0783: 1, L0789: 1,
	L0666: 1, L0663: 1,
	L0664: 1, H0144: 1,
	S0374: 1, L0438: 1,
	H0547: 1, H0519: 1,
	H0593: 1, H0658: 1,

| HACMU05 | 1053236 | 785 | 1717 - 2631 | 2960 | His-10 to Ala-18, Lys-77 to Glu-86, Gln-137 to Trp-143, Gln-256 to Asp-263, Glu-276 to Arg-285. | 17q25 | H0656: 6, H0521: 6, H0543: 4, S0002: 3, L0766: 3, H0664: 2, H0581: 2, H0488: 2, L0771: 2, L0767: 2, L0794: 2, L0789: 2, H0593: 2, H0436: 2, L0748: 2, L0439: 2, H0542: 2, H0423: 2, H0265: 1, H0685: 1, H0657: 1, H0663: 1, H0402: 1, H0125: 1, S0418: 1, S0354: 1, S0358: 1, H0637: 1, S0046: 1, S0278: 1, H0611: 1, H0586: 1, H0486: 1, S0280: 1, L0021: 1, H0457: 1, H0373: 1, H0083: 1, H0622: 1, H0553: 1, H0181: 1- S0036: 1, H0087: 1, H0264: 1, H0413: 1, H0623: 1, H0059: 1, H0429: 1, H0647: 1, S0144: 1, H0529: 1, L0639: 1, S0032: 1, L0740: 1, L0755: 1, L0758: 1, H0444: 1, L0596: 1 and S0192: 1. | 114290, 138033, 162100, 170500, 170500, 170500, 180860, 264470 |

HOVDF79	1053369	786	3 - 587	2961	Ala-8 to Gly-15, Gln-44 to Asn-52, Gly-62 to Ser-68.	L0761: 1, L0667: 1, L0644: 1, L0768: 1, L0659: 1, L0809: 1, L0790: 1, L0666: 1, L0663: 1, H0703: 1, S0374: 1, H0689: 1, H0684: 1, S0332: 1, H0555: 1, L0609: 1, L0749: 1, L0779: 1 and H0136: 1.
HVVBJ54	1053547	787	2 - 610	2962		H0615: 1, H0428: 1, L0638: 1, L0764: 1, L0659: 1, L0438: 1, L0352: 1, H0648: 1, L0439: 1 and L0731: 1.

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601238,
601846,
602216,
602477

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S0218: 1, S0282: 1,
H0254: 1, H0663: 1,
H0306: 1, H0638: 1,
S0418: 1, S0354: 1,
S0358: 1, S0376: 1,
S0408: 1, H0637: 1,
L0476: 1, H0393: 1,
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H0600: 1, T0040: 1,
T0060: 1, H0635: 1,
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H0706: 1, H0036: 1,
H0253: 1, T0048: 1,
H0318: 1, S0474: 1,
S0049: 1, H0309: 1,
H0046: 1, H0569: 1,
H0081: 1, H0154: 1,
S0051: 1, H0083: 1,
S6028: 1, H0238: 1,
H0188: 1, S0318: 1,
H0288: 1, S0022: 1,
H0328: 1, H0039: 1,
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H0674: 1, L0456: 1,

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H0379: 1, H0477: 1,
H0264: 1, H0488: 1,
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L0351: 1, H0429: 1,
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S0464: 1, H0132: 1,
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H0682: 1, H0683: 1,
H0648: 1, S0330: 1,
H0518: 1, H0696: 1,
S0190: 1, H0694: 1,
S0404: 1, H0576: 1,
S0390: 1, L0748: 1,
L0752: 1, L0753: 1,
L0485: 1, L0608: 1,
H0665: 1, H0422: 1,
S0424: 1, L0600: 1 and

HOFMU50	1053548	356 - 547	2963	Gln-36 to Leu-47, Glu-55 to Asn-64.	H0352: 1. H0415: 2, H0583: 1, H0123: 1, H0623: 1, H0518: 1 and L0779: 1.		
HE9MO38	1053585	2 - 268	2964	Pro-26 to Ala-33, Gly-68 to Gln-75.	H0254: 1, S0278: 1, L0764: 1, H0144: 1, S0424: 1 and H0506: 1.		
HOPIF55	1053725	3 - 698	2965	Glu-1 to Gly-11, Gln-83 to Asp-98, Glu-101 to Gln-110, Gln-112 to Gln-120, Thr-128 to Asn-133, Glu-135 to Gly-142, Asp-145 to Cys-153, His-160 to Cys-166.	L0747: 10, L0771: 8, H0333: 7, H0620: 6, H0545: 5, H0024: 5, H0551: 5, L0659: 5, L0665: 5, H0012: 4, L0769: 4, L0375: 4, S0126: 4, L0740: 4, L0754: 4, L0755: 4, L0759: 4, H0294: 3, S0045: 3, H0550: 3, L0471: 3, L0794: 3, H0689: 3, H0682: 3, L0749: 3, H0624: 2, H0171: 2, H0251: 2, H0081: 2, H0050: 2, H0252: 2, H0428: 2, H0124: 2, H0068: 2, L0637: 2, L0368: 2, L0792: 2, L0565: 2, L0779: 2, L0777: 2, L0757: 2, H0352: 2, H0170: 1, H0685: 1, S0356: 1, S0376: 1,	1p36.1-p35	116600, 118210, 120550, 120570, 120575, 121800, 130500, 133200, 138140, 138971, 171760, 171760, 172411, 185470, 230350, 255800, 600975, 602771

HAOTD13	1053746	791	2 - 808	2966	S0360: 1, S0046: 1, H0645: 1, H0549: 1, H0592: 1, H0586: 1, H0013: 1, L0021: 1, T0082: 1, H0544: 1, H0546: 1, H0041: 1, H0570: 1, H0123: 1, H0594: 1, H0328: 1, H0615: 1, H0553: 1, H0413: 1, H0100: 1, S0002: 1, L0762: 1, L0761: 1, L0772: 1, L0646: 1, L0764: 1, L0662: 1, L0767: 1, L0364: 1, L0806: 1, L0805: 1, L0629: 1, L0809: 1, L0789: 1, H0144: 1, H0684: 1, H0659: 1, S0330: 1, S0190: 1, S0037: 1, S3014: 1, S0028: 1, L0744: 1, L0780: 1, L0758: 1, H0343: 1 and H0008: 1.
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S0360: 3, H0150: 3,
H0012: 3, H0413: 3,
S0344: 3, H0529: 3,
L0770: 3, L0766: 3,
L0752: 3, H0686: 2,
S0420: 2, S0046: 2,
H0441: 2, L0622: 2,
H0013: 2, H0327: 2,
H0545: 2, H0606: 2,
L0455: 2, H0100: 2,
T0041: 2, H0509: 2,
S0422: 2, L0774: 2,
L0805: 2, L0659: 2,
H0691: 2, H0690: 2,
H0672: 2, H0521: 2,
S0044: 2, S3014: 2,
S0206: 2, S0032: 2,
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H0352: 2, H0170: 1,
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T0049: 1, H0583: 1,
H0483: 1, H0661: 1,
S0418: 1, S0045: 1,
S0132: 1, H0351: 1,
H0333: 1, H0486: 1,
H0101: 1, T0082: 1,

H0253: 1, S0010: 1, H0318: 1, H0581: 1, H0009: 1, H0123: 1, L0471: 1, H0014: 1, H0188: 1; H0328: 1, H0428: 1, T0023: 1, H0031: 1, H0553: 1, H0644: 1, H0313: 1, H0181: 1, H0617: 1, L0055: 1, H0673: 1, H0361: 1, H0087: 1, T0067: 1, H0433: 1, H0412: 1, H0494: 1, S0448: 1, S0210: 1, L0763: 1, L0371: 1, L0639: 1, L0637: 1, L0761: 1, L0772: 1, L0372: 1, L0645: 1, L0764: 1, L0771: 1, L0521: 1, L0662: 1, L0387: 1, L0650: 1, L0375: 1, L0806: 1, L0776: 1, L0655: 1, L0657: 1, L0783: 1, L0809: 1, L0529: 1, L0666: 1, L0664: 1, L0665: 1, H0689: 1, H0435: 1, H0670: 1, H0648: 1, H0539: 1, H0187: 1, S0028: 1,

HODCJ32	1053772	792	643 - 149	2967	Tyr-1 to Glu-8, Pro-51 to Thr-67, Val-85 to Ser-90, Pro-118 to Gly-128.	L0776: 4, L0756: 4, L0777: 4, L0749: 2, H0052: 1, H0565: 1, H0328: 1, L0770: 1, L0769: 1, L0761: 1, L0805: 1, L0659: 1, L0809: 1, L0787: 1, L0666: 1, L0665: 1, L0439: 1, L0751: 1, L0745: 1, L0747: 1, L0779: 1 and L0758: 1.	L0743: 1, L0750: 1, L0757: 1, L0759: 1, H0445: 1, S0242: 1, S0196: 1, L0698: 1, UNKWN: 1 and L0600: 1.	
HOCPT34	1053973	793	1 - 2355	2968	Ser-19 to Gly-26, Glu-46 to Gln-52, Pro-61 to Ser-66, Arg-71 to Leu-85, Tyr-99 to Tyr-105, Pro-107 to Gly-115, Leu-137 to Leu-147, Glu-175 to Leu-181, Ala-187 to Ser-196, Ile-200 to Trp-209, Ser-353 to Lys-367, Gly-388 to Ser-397, Thr-415 to Val-423,	L0438: 5, L0749: 4, H0266: 3, H0038: 3, L0803: 3, L0666: 3, L0777: 3, L0763: 2, H0547: 2, L0748: 2, L0759: 2, S0031: 2, L0591: 2, S0358: 1, S0376: 1, S0007: 1, S0045: 1, S0132: 1, S0222: 1, H0013: 1, S0010: 1, H0390: 1, H0052: 1, H0596: 1, H0046: 1, H0564: 1,	2q23-q31	100690, 120180, 120180, 120180, 120180, 120190, 142989, 156232, 178600, 266100, 600258, 600321

HFKHC64	1054015	794	1928 - 363	2969	Amino acids	Clones	Cytoband	Accession
					Glu-459 to Cys-469, Gly-471 to Pro-481.	N0007: 1, H0201: 1, H0616: 1, H0551: 1, T0042: 1, H0561: 1, H0131: 1, H0529: 1, L0761: 1, L0641: 1, L0774: 1, L0776: 1, L0659: 1, L0665: 1, H0520: 1, H0519: 1, H0593: 1, S0126: 1, H0660: 1, H0539: 1, H0579: 1, L0743: 1, L0439: 1, L0745: 1, L0747: 1, L0750: 1, S0260: 1 and L0366: 1.		
				2969	Gly-6 to His-16, Arg-20 to Gly-41, Arg-115 to Asn-121, Phe-136 to Glu-144, Lys-152 to Glu-162, Glu-176 to Thr-182, Pro-205 to Gln-212, Lys-229 to Ala-235, Gly-310 to Trp-315, Val-328 to Thr-342.	L0601: 7, H0521: 6, S0418: 4, H0617: 4, L0665: 4, S0046: 3, H0620: 3, H0551: 3, H0413: 3, L0659: 3, H0672: 3, H0522: 3, L0758: 3, H0250: 2, H0012: 2, H0428: 2, H0622: 2, H0628: 2, H0181: 2, S0422: 2, L0794: 2, L0526: 2, L0518: 2, H0547: 2, H0684: 2, H0539: 2, L0602: 2, L0743: 2, L0439: 2, L0751: 2, L0749: 2, L0604: 2,	19q13.2-q13.4	107741, 113900, 122720, 122720, 126340, 126391, 134790, 160900, 164731, 173850, 191044, 207750, 248600, 258501, 600040, 600138

HOPKO37	1054085	795	2117 - 1056	2970		5
				Arg-22 to Met-33, Ile-38 to Ala-49, Val-64 to Pro-85,	L0603: 2, H0295: 1, S0212: 1, H0638: 1, S0356: 1, S0376: 1, S0360: 1, H0370: 1, H0587: 1, H0333: 1, H0486: 1, H0427: 1, H0156: 1, L0021: 1, H0618: 1, H0253: 1, H0052: 1, H0563: 1, H0023: 1, H0266: 1, S0022: 1, H0039: 1, T0006: 1, H0424: 1, H0135: 1, H0264: 1, H0623: 1, H0509: 1, H0647: 1, L0520: 1, L0375: 1, L0654: 1, L0783: 1, L0809: 1, L0789: 1, L0666: 1, L0663: 1, S0374: 1, H0593: 1, S0126: 1, H0690: 1, S0328: 1, S0152: 1, S0146: 1, H0555: 1, L0779: 1, L0752: 1, L0731: 1, L0759: 1, L0592: 1, S0011: 1, H0665: 1, H0667: 1 and S0042: 1.	H0124: 6, L0769: 3, L0768: 3, L0794: 3, L0522: 3, L0666: 3,

HNBVO53	1054122	796	2 - 2332	2971	His-4 to Tyr-10, Ile-58 to Leu-63, Pro-65 to Val-74,	Pro-105 to Ala-123.

L0794: 5, H0542: 5, S0358: 3, H0013: 2, H0618: 2, H0617: 2,

S0420: 2, H0599: 2, H0620: 2, H0617: 2, H0412: 2, H0100: 2, H0646: 2, H0520: 2, H0684: 2, L0588: 2, L0778: 1, H0484: 1, H0661: 1, S0360: 1, H0586: 1, H0427: 1, H0253: 1, H0581: 1, H0546: 1, H0009: 1, N0006: 1, H0172: 1, H0012: 1, H0188: 1, H0181: 1, H0606: 1, H0040: 1, H0059: 1, H0561: 1, S0002: 1, L0503: 1, L0640: 1, L0803: 1, L0652: 1, L0654: 1, L0790: 1, L0664: 1, L0565: 1, H0682: 1, H0658: 1, H0670: 1, H0660: 1, H0539: 1, L0744: 1, L0439: 1, L0754: 1, L0747: 1, L0750: 1, L0777: 1, L0731: 1, S0260: 1, L0593: 1, H0506: 1 and H0352: 1.

	1054155	797	395 - 1168	2972	Leu-122 to Ser-132, Gln-134 to Leu-144, Pro-155 to Ser-166.	L0769: 2, L0764: 2, L0662: 2, L0803: 2, H0670: 2, L0756: 2, L0595: 2, L0361: 2, H0556: 1, S0040: 1, L0785: 1, H0341: 1, H0661: 1, H0662: 1, H0402: 1, S0420: 1, H0370: 1, T0040: 1, T0114: 1, H0253: 1, H0581: 1, H0041: 1, H0687: 1, H0604: 1, H0213: 1, H0644: 1, H0181: 1, H0087: 1, H0412: 1, H0413: 1, H0100: 1, S0382: 1, H0509: 1, S0210: 1, L0763: 1, L0761: 1, L0372: 1, L0641: 1, L0649: 1, L0386: 1, L0809: 1, L0789: 1, L0663: 1, H0693: 1, H0658: 1, H0672: 1, H0539: 1, S0027: 1, L0757: 1, L0758: 1, L0604: 1, H0543: 1, H0506: 1 and H0352: 1.
HOPKF84					Ser-11 to Cys-17, Glu-39 to Tyr-49, Glu-98 to Glu-104,	L0766: 5, L0804: 3, L0105: 2, L0803: 2, L0788: 2, H0659: 2,

HCQDQ11	1054196	798	109 - 174	2973	Gly-122 to Ser-128, Tyr-154 to Val-163, Glu-170 to Thr-195, Leu-213 to Gly-218, Lys-229 to Phe-236, Ser-241 to Ser-248.	L0759: 2, H0624: 1, H0657: 1, H0661: 1, H0601: 1, H0266: 1, H0687: 1, H0032: 1, H0413: 1, S0450: 1, H0509: 1, L0763: 1, L0638: 1, L0761: 1, L0662: 1, L0650: 1, L0805: 1, L0659: 1, L0666: 1, L0664: 1, L0665: 1, S0052: 1, H0547: 1, H0684: 1, L0745: 1, L0747: 1, L0750: 1, L0731: 1, L0758: 1, H0595: 1, S0026: 1, H0543: 1, S0424: 1 and S0456: 1.	17p13.3	113721, 247200, 600059, 601545
HTFML39	1054230	799	1 - 873	2974	Ala-23 to Gly-49,	H0594: 11, H0596: 8, S0282: 5, S0260: 5, S0194: 5, H0543: 5, S0278: 2, H0600: 2, H0592: 2, H0598: 2, S0344: 2, H0595: 2, S0356: 1, H0438: 1, H0574: 1, H0599: 1, S0346: 1, H0318: 1, H0597: 1, S0388: 1, H0316: 1, S0390: 1 and H0124: 2, H0618: 1, H0542: 1.		

Gene					Amino acid positions	Clones	Mapping
					Ser-106 to Pro-115, Gly-160 to Lys-167, Thr-183 to Gly-189, Glu-196 to Gly-211, Ala-218 to Gly-224, Val-257 to Leu-269.	H0123: 1, H0012: 1, H0083: 1, H0428: 1, H0593: 1, L0740: 1 and S0424: 1.	
HOGCR32	1054235	800	3 - 137	2975	Pro-3 to Lys-13, Thr-39 to Ile-45.	H0435: 2	
HFCDL60	1054288	801	1158 - 241	2976	Glu-2 to Thr-7, Arg-64 to Lys-72, Glu-77 to Leu-83, Arg-93 to Ser-102, Ile-118 to Gln-123, Ser-152 to Gly-158, Gln-276 to Ser-282.	AR089: 7, AR104: 6, AR096: 6, AR053: 4, AR039: 4, AR060: 3, AR033: 1, AR061: 1, AR055: 0, L0777: 9, H0556: 8, H0620: 7, L0766: 7, H0521: 7, L0747: 6, S0360: 5, H0250: 5, L0751: 5, L0794: 4, L0754: 4, L0591: 4, S0354: 3, S0358: 3, S0278: 3, H0553: 3, S0144: 3, L0769: 3, L0773: 3, H0547: 3, S0404: 3, S3014: 3, L0743: 3, L0744: 3, L0439: 3, L0752: 3, L0731: 3, H0445: 3, S0218: 2, H0580: 2, S0132: 2, H0393: 2, H0550: 2, S0222: 2,	15q23-q25 118485, 151670, 231680, 272800, 272800, 272800, 276700, 600374, 601780

H0486: 2, H0635: 2, H0575: 2, H0590: 2, H0251: 2, H0309: 2, H0457: 2, H0150: 2, H0050: 2, H0083: 2, H0266: 2, H0288: 2, H0135: 2, H0264: 2, T0041: 2, H0561: 2, L0761: 2, L0771: 2, L0768: 2, L0649: 2, L0804: 2, L0651: 2, L0518: 2, L0789: 2, L0666: 2, H0144: 2, L0565: 2, L0438: 2, S0330: 2, S0037: 2, S0027: 2, L0740: 2, L0745: 2, L0758: 2, S0434: 2, L0581: 2, L0593: 2, L0595: 2, H0542: 2, H0543: 2, T0002: 1, S0040: 1, H0717: 1, H0657: 1, H0656: 1, H0341: 1, H0483: 1, H0255: 1, H0305: 1, H0589: 1, S0420: 1, H0676: 1, H0208: 1, S0045: 1, S0046: 1, H0370: 1, H0392: 1, H0592: 1, H0587: 1, T0040: 1,

S0280: 1, H0156: 1,
H0706: 1, H0318: 1,
H0310: 1, H0231: 1,
H0545: 1, H0009: 1,
H0565: 1, H0123: 1,
H0012: 1, H0047: 1,
H0197: 1, H0024: 1,
H0057: 1, T0010: 1,
H0267: 1, H0252: 1,
H0688: 1, H0617: 1,
S0364: 1, H0124: 1,
S0036: 1, H0040: 1,
H0488: 1, H0412: 1,
H0059: 1, H0100: 1,
H0494: 1, H0560: 1,
S0448: 1, S0440: 1,
H0131: 1, H0130: 1,
H0633: 1, H0647: 1,
S0344: 1, L0770: 1,
L0643: 1, L0645: 1,
L0764: 1, L0521: 1,
L0364: 1, L0381: 1,
L0774: 1, L0775: 1,
L0806: 1, L0653: 1,
L0776: 1, L0659: 1,
L0809: 1, L0663: 1,
L0664: 1, H0699: 1,
S0374: 1, H0435: 1,
H0648: 1, S0152: 1,
S0044: 1, H0134: 1,

HODEC13	1054400	802	1599 - 880	2977	S0406: 1, S0032: 1, L0749: 1, L0756: 1, L0779: 1, L0759: 1, S0260: 1, H0665: 1, H0136: 1, H0423: 1, S0424: 1 and H0506: 1. H0208: 2, H0615: 2, S0001: 1, H0351: 1, H0545: 1, H0081: 1, H0424: 1 and H0334: 1.		
HUSYA18	1054451	803	689 - 138	2978	L0749: 15, L0748: 9, L0758: 9, L0766: 8, L0770: 7, H0266: 6, L0775: 6, L0655: 6, L0731: 6, L0362: 6, S0444: 5, L0764: 5, L0809: 5, S0358: 4, H0637: 4, L0777: 4, L0752: 4, H0305: 3, S0440: 3, L0646: 3, L0773: 3, S0406: 3, L0439: 3, L0740: 3, L0754: 3, L0755: 3, L0759: 3, H0341: 2, S0420: 2, S0356: 2, S0360: 2, S6028: 2, H0551: 2, S0438: 2, L0761: 2, L0373: 2, L0800: 2, L0768: 2, L0774: 2, L0666: 2,	13q12.3-q13.1	157900, 600185, 600185, 600631

L0665: 2, S0378: 2,
S0380: 2, L0750: 2,
L0592: 2, H0423: 2,
H0624: 1, H0685: 1,
H0664: 1, S0418: 1,
S0476: 1, H0393: 1,
H0351: 1, S0222: 1,
H0574: 1, L0623: 1,
H0486: 1, H0156: 1,
T0082: 1, H0036: 1,
S0010: 1, H0318: 1,
H0309: 1, H0569: 1,
S0003: 1, L0055: 1,
H0673: 1, S0036: 1,
H0412: 1, H0413: 1,
S0038: 1, L0351: 1,
T0041: 1, H0494: 1,
H0714: 1, L0369: 1,
L0520: 1, L0763: 1,
L0769: 1, L0772: 1,
L0372: 1, L0645: 1,
L0521: 1, L0767: 1,
L0364: 1, L0794: 1,
L0649: 1, L0375: 1,
L0651: 1, L0378: 1,
L0805: 1, L0653: 1,
L4669: 1, L0659: 1,
L0792: 1, L5286: 1,
L0663: 1, L0664: 1,
S0374: 1, H0689: 1,

| HOCON42 | 1054527 | 804 | 2000 - 1755 | 2979 | Glu-16 to Gly-33, Lys-63 to Lys-71, Asp-77 to Pro-82. | S0250: 5, L0764: 4, H0457: 3, L0789: 3, H0543: 3, H0650: 2, L0717: 2, H0594: 2, H0622: 2, L0769: 2, L0800: 2, L0794: 2, L0657: 2, L0809: 2, H0670: 2, H0521: 2, H0445: 2, H0136: 2, H0542: 2, H0656: 1, H0484: 1, H0255: 1, S0354: 1, S0358: 1, S0360: 1, H0550: 1, H0370: 1, H0597: 1, H0081: 1, H0012: 1, H0620: 1, H0266: 1, H0553: 1, S0364: 1, H0063: 1, H0488: 1, H0412: 1, H0059: 1, H0682: 1, H0684: 1, H0659: 1, H0670: 1, H0660: 1, H0648: 1, H0710: 1, H0521: 1, S0013: 1, H0696: 1, H0436: 1, S0028: 1, L0747: 1, L0786: 1, S0436: 1, L0591: 1, L0599: 1, S0026: 1, H0543: 1, H0422: 1 and S0424: 1. |

| HKMNH37 | 1054550 | 805 | 22 - 1206 | 2980 | Ser-24 to Thr-31, Pro-164 to Asn-173, Val-185 to Arg-192, Gln-199 to Gly-204, Lys-250 to Gly-258, Gln-265 to Ser-277, Gln-322 to Gly-327, Ala-334 to Ser-343, Pro-349 to Cys-356. | L0777: 5, L0748: 4, S0007: 2, L0764: 2, L0809: 2, L0750: 2, L0759: 2, H0669: 1, H0730: 1, H0431: 1, L0022: 1, H0581: 1, H0057: 1, H0271: 1, H0428: 1, L0768: 1, L0794: 1, L0766: 1, L0803: 1, L0805: 1, L0655: 1, L0657: 1, L0518: 1, L0783: 1, L0666: 1, L0665: 1, H0494: 1, H0561: 1, H0509: 1, S0144: 1, S0344: 1, S0210: 1, S0002: 1, L0770: 1, L0667: 1, L0772: 1, L0771: 1, L0662: 1, L0803: 1, L0774: 1, L0806: 1, L0655: 1, L0659: 1, L0636: 1, L0783: 1, L0663: 1, L0664: 1, L0665: 1, H0519: 1, H0689: 1, H0684: 1, H0658: 1, H0660: 1, L0602: 1, H0436: 1, L0779: 1, S0031: 1, L0595: 1 and S0424: 1. |

| HPDWP21 | 1054662 | 806 | 63 - 797 | 2981 | Lys-26 to Glu-41, Lys-149 to Ala-156, Arg-214 to Lys-225, Ile-229 to Lys-235, Glu-240 to His-245. | L0659: 10, L0439: 5, L0378: 4, L0748: 4, L0777: 4, H0657: 3, L0662: 3, L0655: 3, L0665: 3, S0428: 3, H0658: 3, S0434: 3, H0618: 2, S0474: 2, S0049: 2, H0309: 2, H0024: 2, H0412: 2, S0002: 2, S0426: 2, L0646: 2, L0771: 2, L0774: 2, L0657: 2, L0664: 2, H0696: 2, S0027: 2, L0588: 2, L0605: 2, L0601: 2, H0556: 1, T0002: 1, H0716: 1, S0116: 1, H0661: 1, H0662: 1, S0418: 1, S0442: 1, S0444: 1, H0208: 1, S0132: 1, S0476: 1, H0619: 1, H0351: 1, S6022: 1, H0549: 1, S0220: 1, H0455: 1, H0427: 1, S0280: 1, | L0743: 1, L0740: 1, L0751: 1, L0747: 1, L0756: 1, H0445: 1, L0599: 1, H0423: 1, L0698: 1 and H0352: 1. |

HOGCS52	1054677	807	21 - 1388	2982	Met-31 to Arg-37,	AR096: 52, AR039:
						H0706: 1, T0071: 1, H0544: 1, H0546: 1, H0545: 1, N0006: 1, H0123: 1, H0057: 1, S0051: 1, H0188: 1, H0031: 1, L0055: 1, H0673: 1, H0708: 1, H0163: 1, H0090: 1, H0634: 1, H0087: 1, H0623: 1, H0059: 1, S0386: 1, H0633: 1, H0538: 1, H0695: 1, L0763: 1, L0769: 1, L0638: 1, L0639: 1, L5565: 1, L0667: 1, L0764: 1, L0650: 1, L0775: 1, L0375: 1, L0807: 1, L0542: 1, L0384: 1, L0666: 1, H0144: 1, H0519: 1, S0008: 1, H0660: 1, H0518: 1, H0521: 1, S0044: 1, H0436: 1, S0037: 1, S3014: 1, L0744: 1, L0740: 1, L0731: 1, L0757: 1, L0758: 1, S0031: 1, H0445: 1, S0194: 1, H0423: 1 and H0721: 1.

Thr-157 to Arg-176, 49, AR089: 49, AR053:
Gly-183 to Tyr-188, 43, AR060: 33, AR061:
Leu-229 to Asp-234, 20, AR055: 19, AR104:
Leu-275 to Lys-280, 18, AR033: 17
Thr-381 to Asn-386, L0751: 8, L0754: 8,
Asp-424 to Arg-434. L0769: 6, L0803: 6,
L0748: 6, H0100: 5,
H0435: 5, L0439: 5,
L0758: 5, L0665: 4,
L0747: 4, L0749: 4,
S0114: 3, H0619: 3,
H0546: 3, H0457: 3,
S0002: 3, L0637: 3,
L0657: 3, H0658: 3,
L0743: 3, L0777: 3,
L0780: 3, H0445: 3,
S0040: 2, H0255: 2,
H0645: 2, S0278: 2,
H0024: 2, H0416: 2,
H0030: 2, H0553: 2,
H0135: 2, H0649: 2,
L0770: 2, L0804: 2,
L0774: 2, L0805: 2,
L0659: 2, H0659: 2,
H0518: 2, H0555: 2,
L0755: 2, L0757: 2,
L0599: 2, L0603: 2,
H0423: 2, H0265: 1,
H0556: 1, L0460: 1,
H0295: 1, S0218: 1,

H0583: 1, H0650: 1,
S0212: 1, H0483: 1,
H0402: 1, H0125: 1,
S0418: 1, S0420: 1,
S0356: 1, S0360: 1,
S0046: 1, L0717: 1,
H0261: 1, H0370: 1,
H0391: 1, H0438: 1,
H0486: 1, T0039: 1,
H0250: 1, H0156: 1,
L0021: 1, H0575: 1,
T0082: 1, H0253: 1,
S0474: 1, T0071: 1,
H0581: 1, S0049: 1,
H0052: 1, H0235: 1,
H0150: 1, L0471: 1,
H0620: 1, S0362: 1,
S0388: 1, T0010: 1,
H0594: 1, H0266: 1,
H0188: 1, H0687: 1,
H0292: 1, H0615: 1,
H0688: 1, H0048: 1,
H0424: 1, H0031: 1,
H0644: 1, L0143: 1,
H0181: 1, H0617: 1,
L0455: 1, H0708: 1,
H0163: 1, H0591: 1,
H0551: 1, H0488: 1,
H0646: 1, S0344: 1,
L0762: 1, L0640: 1,

HWMCK60	1054751	808	3 - 485	2983	Ser-46 to Ala-56,	L0638: 1, L0761: 1, L0772: 1, L0374: 1, L0764: 1, L0771: 1, L0648: 1, L0521: 1, L0662: 1, L0768: 1, L0794: 1, L0649: 1, L0386: 1, L0381: 1, L0775: 1, L0375: 1, L0378: 1, L0806: 1, L0653: 1, L0776: 1, L0655: 1, L0606: 1, L0518: 1, L0809: 1, L0789: 1, L0793: 1, L0666: 1, L0664: 1, S0052: 1, S0374: 1, L0438: 1, H0547: 1, H0593: 1, H0690: 1, H0682: 1, H0670: 1, H0660: 1, H0666: 1, S0330: 1, S0152: 1, H0696: 1, H0436: 1, L0745: 1, L0750: 1, L0779: 1, S0260: 1, S0434: 1, L0605: 1, L0595: 1, L0361: 1, H0653: 1, S0192: 1, S0194: 1, S0276: 1, H0422: 1, H0008: 1 and H0352: 1.	H0694: 23, L0777: 11,

Asp-85 to Ala-116,
Gln-132 to Lys-140,
Phe-143 to Leu-152.

L0747: 10, L0005: 9,
L0755: 8, L0754: 7,
L0731: 6, L0776: 5,
L0758: 5, L0759: 5,
H0141: 4, H0585: 4,
S0360: 4, L0770: 4,
L0771: 4, L0775: 4,
S0374: 4, L0756: 4,
L0763: 3, L0764: 3,
L0766: 3, L0806: 3,
L0751: 3, L0749: 3,
H0668: 3, H0543: 3,
H0295: 2, H0638: 2,
S0222: 2, S0210: 2,
L0662: 2, L0774: 2,
L0783: 2, L0792: 2,
H0144: 2, S0152: 2,
S0406: 2, L0748: 2,
L0750: 2, L0757: 2,
H0542: 2, H0624: 1,
H0171: 1, T0002: 1,
H0294: 1, S0218: 1,
S0430: 1, H0656: 1,
H0341: 1, H0661: 1,
H0228: 1, S0348: 1,
S0376: 1, S0444: 1,
S0408: 1, S0045: 1,
S0278: 1, H0431: 1,
H0586: 1, H0587: 1,
H0497: 1, H0486: 1,

H0599: 1, H0196: 1, T0110: 1, H0327: 1, H0009: 1, L0157: 1, H0083: 1, H0375: 1, H0594: 1, H0188: 1, H0687: 1, S0003: 1, H0252: 1, H0428: 1, H0031: 1, H0553: 1, H0400: 1, H0591: 1, T0067: 1, H0264: 1, H0059: 1, S0386: 1, T0041: 1, H0494: 1, H0625: 1, S0438: 1, H0641: 1, H0646: 1, S0144: 1, S0344: 1, L0520: 1, L0769: 1, L0638: 1, L0761: 1, L0373: 1, L0768: 1, L0383: 1, L0666: 1, L0664: 1, H0547: 1, H0670: 1, S0328: 1, S0146: 1, H0436: 1, S3012: 1, L0744: 1, L0740: 1, L0752: 1, L0753: 1, H0445: 1, H0653: 1 and H0667: 1. AR096: 3, AR052: 2, AR089: 2, AR060: 2, AR061: 1, AR033: 1, AR053: 1, AR055: 1,	
2984	
3 - 401	
809	
1054790	
HWLOU33	

| HKZBM58 | 1054812 | 810 | 33 - 584 | 2985 | Leu-25 to Arg-30, Glu-41 to Thr-56, Met-74 to Asn-81, Tyr-108 to Thr-116, Asp-126 to Gly-131, Met-141 to Asp-149, Pro-170 to Tyr-184. | L0748: 19, S0372: 12, L0747: 12, L0750: 9, S0408: 7, L0752: 7, L0731: 7, L0758: 7, H0031: 6, L0439: 6, L0740: 6, L0769: 5, L0757: 5, L0471: 4, L0065: 4, H0672: 4, H0543: 4, H0341: 3, H0318: 3, H0616: 3, H0413: 3, L0771: 3, L0803: 3, L0790: 3, H0547: 3, H0689: 3, H0658: 3, S0406: 3, H0436: 3, L0779: 3, | AR039: 0, AR104: 0 S0444: 5, S0360: 4, S0408: 3, H0625: 3, H0436: 3, S0358: 2, H0641: 2, L0803: 2, S0374: 2, H0656: 1, H0662: 1, S0420: 1, S0442: 1, S0354: 1, S0376: 1, H0392: 1, H0427: 1, H0457: 1, H0538: 1, H0547: 1, H0660: 1, H0648: 1, H0672: 1, S0378: 1, S0192: 1, H0423: 1 and H0422: 1. |

H0686: 2, S0212: 2,
H0662: 2, S0356: 2,
S0358: 2, S0360: 2,
H0675: 2, H0580: 2,
H0370: 2, L0623: 2,
H0486: 2, H0575: 2,
S0010: 2, H0428: 2,
H0628: 2, H0674: 2,
H0038: 2, H0056: 2,
S0440: 2, L0520: 2,
L0764: 2, L0767: 2,
L0794: 2, L0766: 2,
L0775: 2, L0783: 2,
L0809: 2, L0791: 2,
L0665: 2, H0659: 2,
H0651: 2, S0330: 2,
H0539: 2, H0134: 2,
L0754: 2, S0260: 2,
L0362: 2, L0361: 2,
H0668: 2, L0440: 1,
H0265: 1, H0295: 1,
S0114: 1, T0049: 1,
H0484: 1, H0661: 1,
H0638: 1, S0354: 1,
S0007: 1, S0045: 1,
S0132: 1, H0619: 1,
H0411: 1, S0222: 1,
H0392: 1, H0592: 1,
H0333: 1, H0574: 1,
T0039: 1, T0114: 1,

H0013: 1, L0021: 1,
H0599: 1, T0082: 1,
S0474: 1, H0581: 1,
H0052: 1, H0251: 1,
T0110: 1, H0597: 1,
H0327: 1, H0545: 1,
H0178: 1, H0373: 1,
S0320: 1, L0171: 1,
H0266: 1, H0084: 1,
H0271: 1, H0687: 1,
S0003: 1, S0214: 1,
H0644: 1, H0181: 1,
L0055: 1, L0455: 1,
H0163: 1, H0040: 1,
H0551: 1, H0412: 1,
S0038: 1, H0100: 1,
T0041: 1, H0494: 1,
H0560: 1, H0561: 1,
H0509: 1, S0150: 1,
L0598: 1, H0529: 1,
L0763: 1, L0637: 1,
L0646: 1, L0804: 1,
L0774: 1, L0776: 1,
L0659: 1, L0526: 1,
L0518: 1, L0519: 1,
L0789: 1, L0666: 1,
S0374: 1, H0519: 1,
H0684: 1, H0660: 1,
H0666: 1, H0648: 1,
H0522: 1, S0146: 1,

					Sequence	Clones
						H0555: 1, S0028: 1, L0742: 1, L0753: 1, H0445: 1, H0595: 1, S0434: 1, L0592: 1, L0485: 1, L0608: 1, S0194: 1 and L0600: 1.
HTEOV06	1054813	811	311 - 799	2986	Glu-12 to Thr-27, Met-45 to Asn-52, Tyr-79 to Thr-87, Asp-97 to Tyr-103, Met-120 to Asp-128, Pro-149 to Tyr-163.	L0747: 2, H0556: 1, S0134: 1, H0341: 1, S0444: 1, H0013: 1, H0575: 1, H0050: 1, H0687: 1, H0628: 1, H0090: 1, H0616: 1, H0551: 1, S0440: 1, H0710: 1, L0748: 1, L0740: 1 and S0434: 1.
HAMGH34	1055012	812	1446 - 661	2987	Thr-8 to Ala-15, Lys-29 to Ser-39, Lys-44 to Asn-52, Gly-61 to Pro-68.	H0560: 1, S0426: 1, L0776: 1, L0545: 1, L0588: 1, L0591: 1 and H0542: 1.
HTEHP29	1055174	813	889 - 305	2988	Gly-1 to His-8, Pro-13 to Asn-30.	L0483: 6, L0749: 5, L0659: 4, L0766: 3, L0591: 3, H0038: 2, L0769: 2, L0665: 2, L0438: 2, H0539: 2, L0758: 2, L0759: 2, L0588: 2, H0650: 1, S0360: 1, H0664: 1, S0003: 1, H0615: 1, H0553: 1, H0644: 1, H0169: 1, S0438: 1,

HNOJJ32	1055248	814	532 - 1914	2989	Gln-2 to Asp-7, Lys-34 to Arg-53, Gly-61 to Glu-70.	H0046: 13, L0439: 6, S0360: 3, H0024: 3, L0769: 3, L0805: 3, L0748: 3, L0749: 3, H0624: 2, H0100: 2, H0520: 2, S0436: 2, L0592: 2, H0685: 1, H0717: 1, H0661: 1, H0664: 1, H0449: 1, S0420: 1, S0376: 1, S0007: 1, S0476: 1, S0300: 1, L0717: 1, H0013: 1, H0156: 1, L0021: 1, H0575: 1, S0010: 1, S0474: 1, L0738: 1, H0178: 1, H0018: 1, S6028: 1, H0188: 1, H0687: 1, H0252: 1, H0428: 1, H0553: 1, S0036: 1, H0038: 1, H0264: 1, S0038: 1, H0561: 1, S0450: 1, S0422: 1,

S0422: 1, L0770: 1, L0662: 1, L0804: 1, L0776: 1, L0666: 1, S0374: 1, S0310: 1, H0520: 1, S0126: 1, L0748: 1, L0439: 1, L0747: 1 and L0757: 1.

| HFPHF52 | 1055304 | 815 | 2 - 1333 | 2990 | Ala-1 to Phe-8,
Glu-16 to Gly-52,
Ser-64 to Glu-80,
Leu-94 to Lys-99,
Ser-123 to Glu-136,
His-157 to Ser-164,
Lys-179 to Pro-190,
Arg-220 to Glu-226,
Phe-244 to Arg-252,
Lys-277 to Thr-288,
Glu-305 to Gly-310,
Glu-328 to Glu-334,
Pro-390 to Ala-401,
Pro-411 to Gln-417. | L0748: 18, L0754: 14,
L0759: 11, S0222: 8,
H0144: 8, H0520: 6,
L0742: 6, H0013: 5,
L0749: 5, H0547: 4,
L0602: 4, L0777: 4,
H0170: 3, H0393: 3,
H0428: 3, H0553: 3,
L0520: 3, L0747: 3,
H0624: 2, S0346: 2,
L0471: 2, H0615: 2,
H0644: 2, S0150: 2,
H0538: 2, L0626: 2,
L0794: 2, L0650: 2,
L0805: 2, L0438: 2,
L0439: 2, L0751: 2,
L0756: 2, L0780: 2,
L0755: 2, L0682: 2,
L0594: 2, L0718: 2,
S0002: 1, L5566: 1,
L0803: 1, L0651: 1,
L0776: 1, L0789: 1,
S0330: 1, S0332: 1,
H0704: 1, S0406: 1,
L0740: 1, L0780: 1,
L0758: 1, L0759: 1,
H0595: 1, S0434: 1,
L0595: 1, S0026: 1,
H0543: 1, H0423: 1 and
H0008: 1. | 19q13.4 | 134790,
191044,
600040,
600138 |

810

HBNMF62	1055381	816	266 - 679	2991		
				Pro-13 to Gly-25, Arg-47 to Gly-54, Pro-74 to Lys-81, His-87 to Trp-93, Glu-107 to Arg-137.	L0002: 1, L0717: 1, H0369: 1, H0455: 1, H0438: 1, H0642: 1, H0331: 1, H0244: 1, H0156: 1, S0010: 1, H0052: 1, L0118: 1, H0051: 1, S0048: 1, S0051: 1, T0010: 1, S6028: 1, L0142: 1, H0674: 1, T0027: 1, L0435: 1, L0369: 1, L0662: 1, L0658: 1, L0659: 1, L0789: 1, L0790: 1, L0791: 1, L0792: 1, L0666: 1, T0068: 1, H0519: 1, S0122: 1, H0672: 1, H0539: 1, S0260: 1 and L0592: 1.	AR089: 2, AR052: 2, AR055: 2, AR039: 1, AR060: 1, AR096: 1, AR033: 1, AR053: 1, AR061: 1, AR104: 0 L0754: 7, L0748: 4, S0007: 3, L0771: 3, L0749: 3, L0750: 3, L0600: 3, L0717: 2, H0618: 2, H0046: 2, H0561: 2, S0422: 2,

| HTPHO72 | 1055426 | 817 | 2 - 1048 | 2992 | Gly-8 to Arg-14, Pro-24 to Arg-29, Leu-64 to Arg-73, His-91 to Arg-97, Tyr-141 to Thr-148, Glu-153 to Met-158, Asp-173 to Arg-180, Lys-185 to Pro-199, Glu-228 to Asp-235, | L0763: 2, L0637: 2, L0794: 2, L0659: 2, H0660: 2, L0439: 2, L0755: 2, T0002: 1, H0583: 1, H0671: 1, S0354: 1, S6016: 1, H0586: 1, L0021: 1, H0052: 1, S0051: 1, T0010: 1, H0083: 1, H0553: 1, H0135: 1, H0063: 1, H0633: 1, L0639: 1, L0646: 1, L0649: 1, L0375: 1, L0655: 1, L0545: 1, L0647: 1, L0664: 1, L0665: 1, H0670: 1, H0672: 1, S0378: 1, H0696: 1, L0751: 1, L0752: 1, L0758: 1, L0759: 1, L0596: 1, L0608: 1 and H0423: 1. | H0547: 8, L0666: 6, S0026: 6, L0803: 5, L0439: 5, L0740: 5, L0754: 5, L0758: 5, L0362: 5, S0242: 5, H0038: 4, S0440: 4, H0529: 4, L0800: 4, L0662: 4, H0648: 4, L0742: 4, L0752: 4, | 15q22.33-q24.1 | 151670, 231680, 276700, 600374, 601780 |

Leu-244 to Glu-258,
Lys-264 to Pro-281,
Asn-310 to Ser-316,
Glu-331 to Leu-349.

L0717: 3, H0550: 3,
H0251: 3, H0622: 3,
H0553: 3, L0598: 3,
L0646: 3, L0794: 3,
L0517: 3, H0144: 3,
L0438: 3, L0757: 3,
L0785: 2, S0212: 2,
S0358: 2, S0360: 2,
H0013: 2, H0052: 2,
H0150: 2, S0003: 2,
H0644: 2, H0059: 2,
L0520: 2, L0766: 2,
L0804: 2, L0806: 2,
L0659: 2, H0520: 2,
H0593: 2, H0658: 2,
S0330: 2, H0521: 2,
L0747: 2, L0750: 2,
L0756: 2, L0608: 2,
H0422: 2, H0170: 1,
H0171: 1, H0149: 1,
H0713: 1, H0125: 1,
S0418: 1, S0376: 1,
S0408: 1, H0580: 1,
S0045: 1, H0549: 1,
S0222: 1, H0612: 1,
H0600: 1, H0586: 1,
H0574: 1, H0632: 1,
L0021: 1, H0575: 1,
H0004: 1, L0109: 1,
L0738: 1, H0530: 1,

| HOPKL18 | 1055439 | 818 | 2 - 1438 | 2993 | Glu-35 to Pro-41, Ala-55 to Arg-67, | L0041: 1, N0006: 1, H0014: 1, L0163: 1, S0051: 1, H0266: 1, S0214: 1, H0615: 1, H0428: 1, T0006: 1, H0674: 1, H0068: 1, S0036: 1, H0616: 1, H0551: 1, H0100: 1, H0494: 1, H0560: 1, S0472: 1, H0646: 1, L0770: 1, L0639: 1, L0761: 1, L0772: 1, L0773: 1, L0653: 1, L0629: 1, L0657: 1, L0529: 1, L0665: 1, S0374: 1, H0519: 1, H0682: 1, H0659: 1, H0670: 1, H0666: 1, H0672: 1, H0539: 1, S0380: 1, S0404: 1, S0406: 1, H0436: 1, H0478: 1, H0627: 1, S0028: 1, L0777: 1, L0780: 1, L0755: 1, L0731: 1, S0196: 1, H0542: 1, H0423: 1, S0424: 1, L0600: 1 and H0352: 1. | L0754: 95, L0755: 38, H0545: 20, H0617: 14, | 22q11.23 | 123620, 600850 |

Ala-82 to Lys-87, Gly-94 to Asp-100, Lys-175 to Asp-181, Asp-185 to Trp-190, Gly-193 to Asp-199, Leu-247 to Trp-252, Pro-278 to Asp-283, Arg-395 to Phe-402, Pro-404 to Asp-410, Pro-412 to Trp-420, Gly-443 to Asp-450.	L0751: 12, H0622: 11, L0731: 10, L0659: 8, L0777: 7, L0759: 7, S0360: 6, H0544: 5, L0764: 5, L0748: 5, H0546: 4, L0750: 4, L0780: 4, L0603: 4, H0620: 3, H0644: 3, H0606: 3, H0059: 3, L0771: 3, L0766: 3, L0806: 3, L0665: 3, H0684: 3, H0618: 2, H0086: 2, H0181: 2, L0644: 2, L0375: 2, L0666: 2, L0664: 2, L0744: 2, L0747: 2, L0779: 2, L0752: 2, L0757: 2, L0758: 2, L0605: 2, H0624: 1, H0171: 1, H0661: 1, H0662: 1, S0046: 1, H0549: 1, H0251: 1, H0012: 1, T0003: 1, H0039: 1, H0553: 1, H0316: 1, H0040: 1, H0477: 1, S0352: 1, L0763: 1, L0769: 1, L0796: 1, L0761: 1, L0772: 1, L0773: 1, L0648: 1, L0807: 1,

HBAAE59	1055446	819	807 - 145	2994		L0658: 1, L0663: 1, H0658: 1, S0332: 1, H0555: 1, L0749: 1 and L0597: 1.		
						L0748: 5, L0747: 5, L0766: 3, L0439: 3, L0749: 3, L0752: 3, L0717: 2, L0763: 2, L0772: 2, L0776: 2, L0753: 2, L0731: 2, L0758: 2, L0605: 2, H0580: 1, S0222: 1, L0022: 1, L0157: 1, H0014: 1, H0622: 1, H0617: 1, H0040: 1, H0616: 1, L0435: 1, T0041: 1, S0426: 1, L0598: 1, L0369: 1, L0373: 1, L0764: 1, L0773: 1, L0662: 1, L0768: 1, L0387: 1, L0809: 1, L0529: 1, L0438: 1, H0659: 1, S0404: 1, H0555: 1, S0028: 1, L0742: 1, L0779: 1, L0777: 1, L0755: 1, L0588: 1, L0599: 1, L0604: 1, S0276: 1 and H0422: 1.	3p21.3	116806, 120120, 120120, 120120, 120436, 120436, 120436, 138320, 168468, 182280, 600163
HTXKD84	1055467	820	1845 -	2995	Lys-18 to Glu-24,	L0439: 13, H0424: 8,		

1177	Leu-45 to Ile-54, Ala-105 to Thr-114, Pro-123 to Leu-130, Leu-167 to Lys-175, Pro-190 to Pro-195, Val-211 to Ser-218.	H0547: 8, L0751: 7, L0777: 6, H0556: 4, H0617: 4, L0435: 4, L0776: 4, L0750: 4, H0253: 3, H0135: 3, H0038: 3, L0774: 3, L0666: 3, S0206: 3, L0605: 3, H0543: 3, H0423: 3, H0624: 2, S0418: 2, L0005: 2, S0007: 2, H0208: 2, S0132: 2, H0013: 2, T0010: 2, H0290: 2, H0213: 2, H0494: 2, L0766: 2, L0659: 2, L0663: 2, L0665: 2, L0438: 2, H0520: 2, H0682: 2, L0743: 2, L0748: 2, L0779: 2, L0758: 2, L0592: 2, H0265: 1, S0040: 1, H0295: 1, S0218: 1, H0657: 1, H0656: 1, S0001: 1, H0402: 1, H0459: 1, S0420: 1, S0046: 1, H0351: 1, H0602: 1, H0586: 1, L0622: 1, H0101: 1, S0280: 1, H0599: 1, H0575: 1, TQ082: 1,

H0618: 1, H0052: 1, H0309: 1, T0110: 1, H0545: 1, H0046: 1, H0041: 1, H0050: 1, H0024: 1, H0057: 1, H0051: 1, H0271: 1, H0416: 1, H0188: 1, H0292: 1, H0286: 1, H0252: 1, H0615: 1, T0006: 1, H0418: 1, H0606: 1, H0674: 1, L0455: 1, H0124: 1, H0068: 1, H0090: 1, H0040: 1, H0616: 1, T0067: 1, H0264: 1, H0488: 1, H0413: 1, H0623: 1, H0059: 1, L0351: 1, T0041: 1, S0306: 1, H0641: 1, H0538: 1, S0210: 1, L0369: 1, L0520: 1, L0763: 1, L0770: 1, L0771: 1, L0662: 1, L0649: 1, L0522: 1, L0375: 1, L0655: 1, L0367: 1, L0664: 1, H0689: 1, H0435: 1, H0659: 1, H0648: 1, H0651: 1, S0380: 1, H0521: 1, S0168: 1,

						H0134: 1, S3014: 1, L0742: 1, L0744: 1, L0740: 1, L0754: 1, L0755: 1, L0759: 1, L0603: 1, H0668: 1, S0196: 1, H0422: 1 and H0352: 1.
HTXRR82	1055480	821	408 - 1364	2996	Val-7 to Glu-20, Pro-99 to Lys-105, Glu-113 to Val-119, Ser-136 to Trp-142, Ala-159 to His-164.	H0556: 2, H0135: 2, S0040: 1, H0657: 1, H0586: 1, H0013: 1, H0428: 1, L0761: 1, L0773: 1, L0768: 1, L0774: 1, L0775: 1, H0521: 1, L0748: 1, L0749: 1, L0759: 1 and H0543: 1.
HAIBU62	1055582	822	1 - 1518	2997	Arg-44 to Val-54.	L0439: 9, S0136: 7, L0777: 3, L0779: 2, H0624: 1, H0170: 1, H0686: 1, H0656: 1, S0408: 1, S0132: 1, H0374: 1, H0266: 1, H0551: 1, L0521: 1, L0662: 1, L0794: 1, L0766: 1, L0381: 1, L0803: 1, L0659: 1, L0809: 1, L0663: 1, L0438: 1, H0659: 1, H0539: 1, L0752: 1, L0592: 1 and L0595: 1.

HDTAY29	1055632	823	1276 - 686	2998		L0731: 5, H0038: 3, L0766: 2, H0683: 2, H0670: 2, H0660: 2, L0747: 2, L0749: 2, L0779: 2, L0758: 2, H0583: 1, S0420: 1, S0360: 1, H0486: 1, H0156: 1, H0599: 1, H0581: 1, H0597: 1, H0247: 1, H0494: 1, H0647: 1, S0210: 1, L0794: 1, L0804: 1, H0436: 1, S0027: 1, L0596: 1, L0485: 1 and H0542: 1.		
HCOQD79	1055767	824	42 - 689	2999	Trp-8 to Gly-16, Ala-18 to Ala-26, His-28 to His-41, Pro-79 to Glu-85.	L0769: 3, H0484: 1, H0546: 1, H0178: 1, H0553: 1, S0366: 1, L0770: 1, L0761: 1, L0772: 1, L0372: 1, L0374: 1, L0645: 1, L0771: 1, L0766: 1, L0653: 1, L0666: 1, L0664: 1, H0670: 1, S0406: 1, L0777: 1, L0601: 1 and S0446: 1.	16p13.3	141750, 141800, 141800, 141800, 141800, 141850, 141850, 141850, 141850, 141850, 156850, 186580, 191092, 600140, 600273,

HAMHN12	1055899	825	2 - 1129	3000	Ala-20 to Arg-28, Gly-37 to Thr-47, Pro-50 to Asn-56, Pro-77 to Ala-82, Thr-114 to Ala-119, Pro-133 to Thr-141, Gly-150 to Cys-161, Pro-165 to Asn-177, Thr-179 to Gly-188, Glu-198 to Cys-212, Ile-216 to Arg-222, Val-254 to Arg-265, Ser-271 to Leu-276, Lys-281 to Asn-286, Pro-341 to Lys-346, Ala-349 to Met-355.	AR096: 626, AR039: 392, AR089: 360, AR053: 315, AR060: 315, AR033: 157, AR104: 153, AR061: 115, AR055: 31 L0518: 7, L0777: 6, L0809: 5, L0744: 4, L0649: 2, L0659: 2, H0658: 2, L0748: 2, L0747: 2, L0750: 2, H0411: 1, H0013: 1, L0021: 1, H0123: 1, H0050: 1, H0163: 1, H0560: 1, L0763: 1, L0770: 1, L0769: 1, L0761: 1, L0662: 1, L0375: 1, L0776: 1, L0439: 1, L0749: 1, L0779: 1 and L0599: 1.	601313, 601785
HODIY67	1056000	826	2 - 1957	3001	Ala-27 to Lys-35, Arg-63 to Ile-70, Tyr-100 to Ala-105, Ser-159 to Thr-168.	L0766: 6, L0776: 6, L0777: 5, L0803: 4, L0731: 3, L0759: 3, S0222: 2, H0013: 2, L0157: 2, L0805: 2, L0666: 2, H0521: 2, L0740: 2, L0361: 2, H0170: 1, H0171: 1,	15q

HNTRS57	1056097	827	2 - 1357	3002	Asn-6 to Val-11.	S0212: 1, S0442: 1, S0358: 1, S0376: 1, S0444: 1, S0360: 1, L0717: 1, H0587: 1, S0414: 1, H0250: 1, H0427: 1, H0575: 1, H0596: 1, H0546: 1, S0003: 1, H0615: 1, H0644: 1, H0040: 1, H0477: 1, H0646: 1, H0538: 1, L0763: 1, L0638: 1, L0804: 1, L0774: 1, L0809: 1, L0519: 1, L0788: 1, L4501: 1, L0665: 1, S0374: 1, H0690: 1, H0648: 1, H0651: 1, S0328: 1, H0539: 1, S0404: 1, H0436: 1, L0750: 1, L0779: 1, S0434: 1, L0599: 1 and L0595: 1. / AR096: 2, AR060: 1, AR089: 1, AR039: 0, AR033: 0, AR104: 0, AR055: 0, AR061: 0, L0747: 16, L0758: 8, L0751: 7, L0774: 6, H0617: 5, L0803: 5, L0809: 5, L0794: 4,

L0766: 4, L0666: 4,
L0777: 4, L0581: 4,
H0265: 3, L0534: 3,
H0004: 3, L0764: 3,
H0682: 3, L0750: 3,
S0212: 2, S0418: 2,
S0358: 2, H0013: 2,
H0424: 2, H0181: 2,
H0616: 2, L0769: 2,
L0761: 2, L0775: 2,
L0375: 2, L0655: 2,
L0657: 2, L0659: 2,
L0663: 2, L0665: 2,
H0547: 2, H0658: 2,
H0670: 2, H0660: 2,
H0648: 2, L0749: 2,
L0752: 2, L0755: 2,
L0759: 2, L0589: 2,
L0608: 2, H0423: 2,
H0624: 1, H0170: 1,
H0556: 1, H0685: 1,
H0717: 1, H0738: 1,
H0341: 1, H0484: 1,
S0442: 1, S0360: 1,
H0393: 1, H0441: 1,
H0392: 1, H0415: 1,
H0587: 1, H0333: 1,
S0280: 1, H0156: 1,
H0599: 1, H0052: 1,
H0205: 1, H0150: 1,

| HUKFL74 | 1056102 | 828 | 1 - 177 | 3003 | Arg-13 to Glu-21, Ser-36 to Gly-57. | H0375: 1, H0615: 1, H0644: 1, H0606: 1, H0038: 1, H0412: 1, H0494: 1, S0422: 1, S0426: 1, L0763: 1, L0770: 1, L0639: 1, L0662: 1, L0768: 1, L0649: 1, L0804: 1, L0805: 1, L0776: 1, L0783: 1, L0793: 1, L0664: 1, H0144: 1, S0374: 1, H0593: 1, S0126: 1, H0689: 1, H0539: 1, H0518: 1, S0013: 1, S0404: 1, H0576: 1, S0027: 1, L0786: 1, L0780: 1, L0731: 1, H0595: 1, L0601: 1, H0668: 1, H0653: 1, H0665: 1 and S0194: 1. L0754: 8, L0741: 5, L0748: 5, L0756: 5, H0550: 4, L0751: 4, L0758: 4, H0265: 3, H0556: 3, L0806: 3, S0418: 2, T0010: 2, S0002: 2, L0777: 2, L0755: 2, H0445: 2, L0603: 2, H0170: 1, | 19p13.1 | 143890, 151440, 600173, 600276, 600310, 600310, 601604, 601843 |

HTEBF05	1056104	829	3 - 344	3004		3p25	
				Arg-7 to Thr-15, Leu-23 to Asp-30, Glu-37 to Val-48, Thr-54 to Pro-64,	L0615: 1, H0159: 1, S0040: 1, H0483: 1, H0254: 1, S0410: 1, H0734: 1, H0549: 1, H0574: 1, H0485: 1, H0013: 1, H0618: 1, H0052: 1, H0597: 1, H0150: 1, H0408: 1, H0416: 1, H0188: 1, H0252: 1, H0030: 1, H0644: 1, S0366: 1, H0634: 1, T0067: 1, H0059: 1, T0042: 1, H0560: 1, H0647: 1, L0763: 1, L0371: 1, L0637: 1, L0667: 1, L0800: 1, L0764: 1, L0771: 1, L0767: 1, L0768: 1, L0803: 1, L0776: 1, L0659: 1, L0789: 1, L0532: 1, L0665: 1, H0144: 1, H0698: 1, S0126: 1, S0392: 1, L0740: 1, L0747: 1, L0779: 1, L0757: 1 and S0436: 1. AR061: 3, AR039: 3, AR089: 3, AR096: 2, AR053: 2, AR060: 2, AR055: 1, AR104: 1,		154705, 193300, 193300, 227646,

HOPKD19	1056275	830	158 - 1084	3005			
					Ala-95 to Ser-101, Pro-103 to Asp-108, Glu-177 to Lys-183, Lys-226 to Lys-234, Leu-252 to Gly-257, Gln-293 to Ser-301.	12p13	H0556: 29, L0748: 28, L0745: 18, H0620: 16, H0040: 15, L0595: 14, H0547: 13, S0358: 12, L0777: 12, H0559: 11, S0046: 9, S0440: 9, L0740: 9, H0265: 8, H0494: 8, L0751: 8, H0341: 7, S0408: 7, L0646: 7, S0126: 7, L0746: 7, L0747: 7, H0543: 7, H0657: 6, H0318: 6, H0052: 6, H0135: 6, L0775: 6, L0655: 6, L0666: 6, H0519: 6, S0406: 6, S0045: 5, H0486: 5, H0581: 5, H0024: 5, L0375: 5, L0659: 5, H0520: 5, S0206: 5, L0750: 5, L0752: 5, T0002: 4, H0717: 4, H0484: 4, S0376: 4, H0497: 4, H0257: 4, H0545: 4, H0644: 4,	103950, 120580, 131440, 139130, 142680, 176260, 190450, 200990, 216950, 600228, 600414, 600618, 602096
				Thr-103 to Thr-108.	AR033: 1 L0665: 4, H0659: 2, H0553: 1, H0038: 1, L0659: 1, L0777: 1, L0758: 1 and L0601: 1.		253260, 278720, 601154, 601253, 602011

H0634: 4, H0087: 4, L0766: 4, L0805: 4, L0663: 4, H0144: 4, H0134: 4, S0028: 4, L0744: 4, L0757: 4, L0596: 4, L0588: 4, S0424: 4, S0116: 3, H0663: 3, H0125: 3, S0356: 3, S0410: 3, H0619: 3, H0549: 3, S0182: 3, H0009: 3, H0123: 3, H0266: 3, L0483: 3, T0006: 3, H0100: 3, S0150: 3, S0144: 3, S0344: 3, L0637: 3, L0772: 3, L0764: 3, L0662: 3, L0649: 3, S0328: 3, H0521: 3, L0754: 3, L0758: 3, S0434: 3, S0436: 3, L0592: 3, L0593: 3, H0667: 3, H0422: 3, H0352: 3, H0624: 2, H0713: 2, H0716: 2, H0656: 2, H0662: 2, H0638: 2, S0442: 2, S0360: 2, H0208: 2, S0222: 2, H0592: 2, L0623: 2, H0013: 2, H0635: 2,

H0199: 2, H0083: 2,
H0510: 2, H0594: 2,
H0288: 2, H0622: 2,
H0553: 2, H0111: 2,
H0617: 2, H0551: 2,
H0056: 2, S0038: 2,
H0560: 2, H0538: 2,
S0422: 2, H0529: 2,
L0770: 2, L0769: 2,
L0639: 2, L0761: 2,
L0641: 2, L0626: 2,
L0768: 2, L0650: 2,
L0658: 2, L0809: 2,
L0664: 2, H0699: 2,
H0593: 2, H0689: 2,
H0435: 2, H0658: 2,
H0539: 2, H0436: 2,
S3014: 2, L0743: 2,
L0591: 2, L0485: 2,
L0581: 2, H0542: 2,
H0008: 2, H0170: 1,
H0171: 1, H0224: 1,
H0686: 1, S0040: 1,
H0295: 1, S0114: 1,
H0583: 1, L0785: 1,
H0661: 1, S0418: 1,
S0420: 1, S0354: 1,
H0580: 1, S0007: 1,
H0645: 1, H0393: 1,
H0351: 1, S0278: 1,

H0369: 1, H0550: 1, H0431: 1, H0600: 1, H0586: 1, H0587: 1, H0333: 1, H0643: 1, T0114: 1, H0101: 1, H0069: 1, H0599: 1, H0575: 1, H0036: 1, H0390: 1, H0196: 1, T0103: 1, T0115: 1, H0597: 1, H0231: 1, H0546: 1, H0046: 1, H0041: 1, H0178: 1, L0471: 1, H0023: 1, T0003: 1, H0057: 1, H0014: 1, H0201: 1, S0388: 1, H0071: 1, H0354: 1, H0355: 1, H0375: 1, S6028: 1, H0271: 1, H0687: 1, H0290: 1, H0286: 1, H0110: 1, S0022: 1, H0252: 1, H0615: 1, H0428: 1, H0213: 1, H0030: 1, L0142: 1, H0628: 1, L0055: 1, H0212: 1, H0708: 1, H0316: 1, H0038: 1, H0063: 1, T0067: 1, H0379: 1, H0264: 1, H0272: 1, H0487: 1,

H0433: 1, H0269: 1,
H0412: 1, H0413: 1,
H0623: 1, H0334: 1,
H0561: 1, S0450: 1,
H0633: 1, H0647: 1,
H0646: 1, S0002: 1,
L0369: 1, L0796: 1,
L5575: 1, L0771: 1,
L0363: 1, L0767: 1,
L5564: 1, L0388: 1,
L0776: 1, L0807: 1,
L0518: 1, L0383: 1,
L0382: 1, L0368: 1,
L0793: 1, L0532: 1,
L0665: 1, H0702: 1,
S0374: 1, H0693: 1,
L0438: 1, H0684: 1,
H0670: 1, H0672: 1,
H0651: 1, S0380: 1,
S0152: 1, H0696: 1,
S0044: 1, H0555: 1,
L0609: 1, S3012: 1,
S0037: 1, L0742: 1,
L0756: 1, L0755: 1,
L0731: 1, L0759: 1,
S0031: 1, H0444: 1,
L0584: 1, L0589: 1,
L0594: 1, L0601: 1,
H0136: 1, S0192: 1,
S0194: 1 and H0423: 1.

| HLICR58 | 1056290 | 831 | 3 - 932 | 3006 | Ser-48 to Asp-53, Asn-63 to Arg-69, Lys-77 to Lys-82. | AR061: 7, AR089: 7, AR053: 5, AR060: 5, AR033: 4, AR096: 4, AR055: 4, AR039: 3, AR104: 3, AR052: 0 L0750: 33, L0588: 29, H0341: 22, L0361: 22, L0748: 19, H0657: 18, H0648: 18, S0360: 17, H0670: 17, S0358: 16, H0170: 15, H0144: 14, L0752: 14, L0757: 13, L0758: 13, S0007: 12, H0494: 12, L0520: 12, H0543: 12, L0471: 11, L0521: 11, L0767: 11, H0659: 11, L0749: 11, L0783: 10, H0305: 9, S0046: 9, H0615: 9, L0754: 9, H0624: 8, H0014: 8, L0663: 8, S0126: 8, H0672: 8, L0591: 8, L0604: 8, H0136: 8, S0045: 7, H0031: 7, H0633: 7, H0436: 7, S0028: 7, H0125: 6, S0132: 6, H0411: 6, H0392: 6, H0574: 6, T0109: 6, S0438: 6, L0762: 6, |

L0517: 6, S0374: 6,
H0660: 6, S0378: 6,
S0027: 6, S0114: 5,
H0333: 5, H0486: 5,
H0545: 5, H0123: 5,
H0328: 5, H0412: 5,
H0413: 5, L0761: 5,
L0776: 5, L0659: 5,
L0526: 5, H0658: 5,
S0380: 5, H0134: 5,
L0740: 5, L0747: 5,
L0605: 5, L0362: 5,
H0422: 5, S0424: 5,
H0686: 4, S0342: 4,
S0376: 4, H0351: 4,
H0586: 4, L0586: 4,
H0250: 4, H0421: 4,
H0009: 4, L0163: 4,
H0083: 4, H0266: 4,
S0022: 4, H0617: 4,
H0135: 4, H0087: 4,
H0116: 4, H0100: 4,
L0662: 4, L0497: 4,
L0655: 4, L0527: 4,
L0657: 4, L0666: 4,
H0666: 4, S0044: 4,
H0576: 4, S3012: 4,
S3014: 4, L0756: 4,
H0171: 3, S6024: 3,
H0484: 3, H0669: 3,

S0410: 3, H0497: 3,
H0632: 3, L0623: 3,
H0599: 3, H0575: 3,
T0048: 3, H0581: 3,
H0597: 3, H0039: 3,
H0644: 3, H0163: 3,
H0551: 3, T0067: 3,
T0041: 3, H0509: 3,
S0422: 3, H0529: 3,
L0770: 3, L0769: 3,
L0648: 3, L0768: 3,
L0364: 3, L0375: 3,
L0806: 3, L0782: 3,
L0543: 3, H0682: 3,
S0328: 3, S0330: 3,
L0751: 3, S0031: 3,
H0445: 3, H0595: 3,
L0594: 3, S0026: 3,
H0665: 3, H0423: 3,
L0600: 3, T0002: 2,
H0685: 2, H0294: 2,
S0218: 2, H0650: 2,
H0483: 2, H0255: 2,
H0671: 2, H0662: 2,
H0306: 2, H0402: 2,
S0420: 2, H0580: 2,
H0393: 2, H0438: 2,
H0592: 2, H0587: 2,
L0622: 2, T0060: 2,
H0156: 2, H0098: 2,

T0082: 2, S0010: 2,
S0182: 2, H0318: 2,
H0309: 2, T0115: 2,
T0110: 2, H0012: 2,
H0023: 2, H0024: 2,
H0057: 2, H0015: 2,
H0687: 2, H0286: 2,
S0003: 2, H0688: 2,
H0428: 2, T0006: 2,
S0036: 2, H0090: 2,
H0040: 2, H0059: 2,
H0625: 2, H0646: 2,
S0210: 2, L0598: 2,
L0763: 2, L0500: 2,
L0501: 2, L0549: 2,
L0803: 2, L0376: 2,
L0653: 2, L0542: 2,
H0547: 2, H0214: 2,
H0187: 2, S0392: 2,
S0390: 2, L0742: 2,
H0444: 2, L0596: 2,
L0589: 2, L0590: 2,
L0581: 2, L0599: 2,
L0603: 2, H0668: 2,
H0653: 2, S0192: 2,
H0542: 2, S0452: 2,
H0506: 2, L0615: 1,
H0394: 1, H0159: 1,
S0134: 1, H0583: 1,
H0656: 1, L0760: 1,

L0785: 1, S0116: 1, S0212: 1, H0661: 1, H0663: 1, H0664: 1, H0589: 1, S0444: 1, H0675: 1, H0489: 1, H0730: 1, S0278: 1, H0369: 1, H0441: 1, H0492: 1, T0040: 1, H0013: 1, H0069: 1, H0635: 1, H0209: 1, H0251: 1, H0085: 1, H0263: 1, H0231: 1, H0327: 1, H0546: 1, H0150: 1, H0081: 1, T0003: 1, H0082: 1, H0373: 1, S0051: 1, H0510: 1, H0375: 1, L0171: 1, H0188: 1, S0336: 1, H0112: 1, H0048: 1, H0606: 1, L0055: 1, H0032: 1, H0166: 1, H0169: 1, H0211: 1, H0068: 1, S0366: 1, H0316: 1, H0634: 1, H0062: 1, H0155: 1, H0477: 1, H0488: 1, S0038: 1, H0279: 1, S0448: 1, S0464: 1, L0065: 1, H0131: 1, H0130: 1,

HISBE12	1056376	832	53 - 1276	3007		
				Leu-76 to Lys-84, Lys-90 to Leu-97, His-115 to Thr-120, Pro-128 to Trp-136, Asp-393 to Ala-403.	AR096: 6, AR089: 5, AR053: 3, AR055: 1, AR104: 1,	AR060: 6, AR052: 5, AR033: 3, AR061: 1, AR039: 0

H0641: 1, H0647: 1,
S0144: 1, S0142: 1,
L0640: 1, L0637: 1,
L0646: 1, L0764: 1,
L0363: 1, L0794: 1,
L0766: 1, L0499: 1,
L0522: 1, L0774: 1,
L0775: 1, L0651: 1,
L0378: 1, L0805: 1,
L0509: 1, L0652: 1,
L0555: 1, L0513: 1,
L0656: 1, L0559: 1,
L0384: 1, L0809: 1,
L0529: 1, L0368: 1,
L0532: 1, H0691: 1,
H0520: 1, H0519: 1,
H0684: 1, H0651: 1,
S0454: 1, S0013: 1,
S0406: 1, H0478: 1,
L0744: 1, L0439: 1,
L0731: 1, H0343: 1,
L0592: 1, L0485: 1,
L0608: 1, L0593: 1,
H0217: 1, H0216: 1,
H0008: 1 and H0352: 1.

Clone	ID	SEQ ID	NT range	SEQ ID	Residues	Features	cytoband	Other
						H0539: 8, H0046: 3, H0039: 2, H0553: 2, H0090: 2, L0750: 2, L0605: 2, S0282: 1, H0431: 1, H0036: 1, H0421: 1, H0196: 1, T0003: 1, S6028: 1, H0252: 1, H0031: 1, H0111: 1, H0591: 1, H0412: 1, T0068: 1, S0044: 1, L0752: 1, H0445: 1 and L0581: 1.		120220, 120240, 123580, 151385,
HAJAH48	1056400	833	1 - 210	3008	Lys-10 to Ser-16, Pro-30 to Ala-36.	H0635: 1 and H0561: 1.		
HSKJC61	1056407	834	210 - 1436	3009	His-8 to Gly-18, Pro-58 to Lys-68, Gln-109 to Lys-115, Val-175 to Pro-180, Ser-221 to Asp-228, Thr-256 to His-261, Asp-287 to Asp-294, Thr-321 to Asp-328, Asn-349 to Ile-357, Phe-376 to Glu-386, Pro-396 to Ser-409.	AR089: 3, AR055: 3, AR096: 3, AR060: 2, AR061: 2, AR053: 2, AR039: 2, AR104: 2, AR033: 2, S0132: 2, S0358: 1, H0615: 1, T0023: 1, H0435: 1, S3014: 1, L0740: 1, L0591: 1 and L0362: 1.	21q22.3	
HEEBK29	1056454	835	1015 - 3060	3010				

HCHMM19	1056617	836	1 - 1182	3011	L0751: 25, L0665: 23, L0743: 10, H0656: 12, L0620: 8, H0617: 9, L0657: 8, H0318: 7, H0658: 7, H0650: 5, H0483: 5, H0657: 4, H0012: 4, H0024: 4, H0689: 4, H0341: 3, H0484: 3, H0618: 3, H0253: 3, H0688: 3, H0659: 3, H0670: 3, L0603: 3, S0358: 2, H0052: 2, H0615: 2, H0264: 2, H0100: 2, L0763: 2, L0637: 2, L0651: 2, L0659: 2, L0791: 2, L0663: 2, H0555: 2, L0748: 2, L0779: 2, S0282: 1, H0255: 1, H0306: 1, S0045: 1, L0717: 1,	171860, 190685, 236100, 236200, 240300, 267750, 600065, 601072, 601145

HE8NG02	1056625	837	85 - 1041	3012		
				Thr-2 to Asn-10, Ser-72 to Lys-78, Gly-95 to Thr-101, Phe-134 to Ile-147, Lys-163 to Lys-172, Gln-199 to Glu-206, Ala-212 to Trp-224, Lys-230 to His-236, Arg-238 to Glu-244, Asp-249 to Gly-254, Met-260 to Tyr-266,	L0394: 1, H0549: 1, S6016: 1, S0222: 1, H0455: 1, H0635: 1, H0427: 1, S0280: 1, H0042: 1, H0122: 1, H0123: 1, H0050: 1, L0163: 1, H0356: 1, H0399: 1, H0594: 1, H0252: 1, H0553: 1, H0181: 1, H0673: 1, L0638: 1, L0639: 1, L0662: 1, L0766: 1, L0804: 1, L0666: 1, H0690: 1, H0682: 1, H0684: 1, H0435: 1, H0660: 1, H0672: 1, L0754: 1, L0758: 1, S0458: 1, S0456: 1 and H0352: 1.	AR052: 4, AR039: 3, AR055: 3, AR060: 3, AR061: 3, AR089: 2, AR033: 2, AR053: 2, AR096: 1, AR104: 1 H0624: 4, H0170: 3, H0328: 3, H0329: 2, H0013: 2, L0747: 2, L0777: 2, H0046: 1 and L0759: 1.

HWHKD22	1056654	838	1287 - 601	3013	Arg-272 to Arg-279. Thr-32 to His-38, Thr-46 to Asn-55, Asn-158 to Gly-165, Thr-191 to Asn-199.	AR096: 14, AR089: 14, AR033: 10, AR061: 8, AR060: 8, AR052: 7, AR055: 6, AR053: 5, AR104: 3, AR039: 2 L0766: 3, L0659: 3, L0744: 3, L0794: 2, L0805: 2, L0665: 2, H0648: 2, H0305: 1, H0586: 1, H0599: 1, H0428: 1, H0551: 1, S0038: 1, S0422: 1, L0763: 1, L0637: 1, L0662: 1, L0803: 1, L0804: 1, L0806: 1, L0776: 1, L0655: 1, L0661: 1, L0787: 1, S0374: 1, H0520: 1, L0740: 1, L0750: 1, L0777: 1, L0752: 1, L0759: 1 and L0592: 1.		
HOCPJ87	1056666	839	22 - 1125	3014	Glu-5 to His-15, Phe-20 to Lys-41, Gln-43 to Tyr-49, Asn-146 to Thr-152, His-157 to Phe-164, Arg-181 to Gly-191, Lys-219 to Asn-224,	L0777: 6, L0766: 5, L0747: 5, L0744: 4, H0660: 3, L0750: 3, H0657: 2, L0769: 2, S0298: 1, S0360: 1, H0730: 1, H0592: 1, H0544: 1, H0629: 1,	18p11.3-p11.2	142946, 202200

| HAAAA59 | 1056671 | 840 | 3 - 2765 | 3015 | Lys-6 to Ser-15, Ser-23 to Ala-28, Thr-81 to Gln-89, Gln-191 to Gly-198. | H0694: 92, L0766: 9, L0747: 8, S0126: 7, L0439: 7, H0266: 6, L0776: 6, L0666: 6, L0748: 6, L0759: 6, H0622: 5, H0038: 5, H0623: 5, L0763: 5, L0659: 5, H0656: 4, S0358: 4, S0476: 4, H0486: 4, H0013: 4, L0598: 4, H0529: 4, L0662: 4, L0805: 4, L0655: 4, L0663: 4, |
| | | | | | Lys-261 to Leu-278, Thr-291 to Asn-297, Glu-302 to Thr-312, Ser-316 to Thr-342, Gln-344 to Asp-367. | S0334: 1, S0003: 1, H0591: 1, H0641: 1, L0598: 1, H0529: 1, L0762: 1, L0502: 1, L0763: 1, L0372: 1, L0646: 1, L0644: 1, L0768: 1, L0775: 1, L0806: 1, L0527: 1, H0144: 1, L0438: 1, H0690: 1, H0658: 1, H0648: 1, S0146: 1, S0406: 1, L0740: 1, L0751: 1, L0749: 1, L0779: 1, L0755: 1, L0731: 1, L0758: 1, L0759: 1, S0434: 1 and H0506: 1. |

H0521: 4, S0434: 4, H0657: 3, H0497: 3, H0574: 3, H0328: 3, H0615: 3, H0644: 3, H0551: 3, L0770: 3, L0764: 3, L0665: 3, H0144: 3, S0374: 3, H0547: 3, H0659: 3, S0330: 3, L0752: 3, H0445: 3, S0436: 3, H0717: 2, H0638: 2, S0045: 2, L0717: 2, S0414: 2, H0485: 2, S0280: 2, H0156: 2, S0010: 2, H0032: 2, H0494: 2, S0440: 2, S0422: 2, L0667: 2, L0646: 2, L0768: 2, L0652: 2, L0438: 2, H0658: 2, H0539: 2, S0044: 2, H0555: 2, L0744: 2, L0751: 2, L0749: 2, L0777: 2, L0731: 2, L0758: 2, L0592: 2, L0581: 2, L0593: 2, H0653: 2, S0276: 2, H0543: 2, L0411: 1, H0556: 1, H0220: 1, H0738: 1, S0114: 1, T0049: 1,

H0583: 1, H0650: 1,
S0116: 1, H0341: 1,
S0212: 1, S0356: 1,
S0354: 1, S0444: 1,
S0360: 1, S0408: 1,
H0722: 1, S0132: 1,
H0619: 1, H0393: 1,
H0437: 1, S0222: 1,
H0431: 1, H0592: 1,
H0586: 1, H0349: 1,
H0036: 1, L0105: 1,
T0048: 1, H0581: 1,
H0374: 1, H0046: 1,
H0123: 1, H0050: 1,
L0471: 1, H0355: 1,
S0250: 1, H0688: 1,
H0029: 1, H0039: 1,
L0483: 1, T0006: 1,
H0553: 1, L0055: 1,
H0169: 1, H0124: 1,
H0068: 1, H0316: 1,
H0591: 1, H0264: 1,
H0268: 1, H0413: 1,
H0056: 1, T0042: 1,
S0016: 1, H0561: 1,
S0438: 1, H0509: 1,
S0150: 1, H0641: 1,
H0646: 1, S0142: 1,
S0344: 1, S0426: 1,
L0371: 1, L0771: 1,

HOSBJ18	1056672	841	422 - 2026	3016	Ile-15 to Lys-33, Phe-99 to Lys-104, Ile-107 to Cys-114.	L0521: 1, L0649: 1, L0389: 1, L0803: 1, L0804: 1, L0775: 1, L0661: 1, L0629: 1, L0657: 1, L0367: 1, L0789: 1, L0664: 1, H0520: 1, H0519: 1, H0593: 1, H0689: 1, H0670: 1, H0672: 1, S0378: 1, H0518: 1, S0152: 1, S0350: 1, H0522: 1, H0704: 1, S0406: 1, S0390: 1, S0027: 1, L0756: 1, L0779: 1, L0780: 1, L0757: 1, L0596: 1, L0588: 1, L0589: 1, L0366: 1, S0011: 1, S0026: 1, H0665: 1, S0194: 1, H0423: 1, S0424: 1 and H0008: 1. L0779: 8, L0665: 6, L0731: 6, L0662: 4, L0663: 4, L0754: 4, H0486: 3, H0013: 3, S6028: 3, H0031: 3, L0598: 3, L0776: 3, L0666: 3, H0144: 3, S0126: 3, S0026: 3, S0214: 2, H0428: 2,

H0163: 2, H0090: 2,
H0488: 2, L0649: 2,
L0775: 2, H0660: 2,
L0751: 2, L0756: 2,
L0755: 2, L0758: 2,
L0759: 2, L0596: 2,
H0624: 1, S0046: 1,
H0645: 1, H0586: 1,
H0250: 1, H0156: 1,
H0318: 1, T0071: 1,
S0049: 1, H0457: 1,
L0471: 1, H0057: 1,
H0239: 1, H0266: 1,
H0687: 1, S0003: 1,
H0615: 1, H0553: 1,
H0644: 1, H0316: 1,
H0598: 1, H0591: 1,
S0294: 1, S0150: 1,
UNKWN: 1, L0763: 1,
L0646: 1, L0766: 1,
L0375: 1, L0527: 1,
L0659: 1, L0518: 1,
L0438: 1, H0593: 1,
H0435: 1, H0648: 1,
S0380: 1, S0152: 1,
H0521: 1, H0627: 1,
S0390: 1, L0745: 1,
L0750: 1, L0777: 1,
L0752: 1, L0362: 1 and
H0543: 1.

HUSGX12	1056736	842	2 - 838	3017	Arg-1 to Thr-6, Arg-86 to Gly-91, Ser-102 to Leu-107, Leu-111 to Arg-122, Arg-140 to Gly-145, Glu-170 to Ser-195, Pro-200 to Thr-221, Gly-234 to Asp-250.	L0750: 4, H0622: 3, L0792: 3, H0619: 2, H0050: 2, L0759: 2, H0624: 1, H0661: 1, L0005: 1, S0376: 1, S0360: 1, H0575: 1, H0597: 1, H0687: 1, H0412: 1, L0065: 1, L0761: 1, L0800: 1, L0794: 1, L0784: 1, L0807: 1, H0690: 1, H0672: 1, S0206: 1, L0748: 1, L0751: 1, L0747: 1, L0779: 1 and H0445: 1.
HPDRG02	1056764	843	2 - 1405	3018		7, S0360: 18, L0794: 15, L0748: 13, L0740: 10, H0521: 9, L0666: 8, H0766: 7, L0439: 7, H0046: 6, H0031: 6, L0803: 6, L0783: 6, H0547: 6, S0436: 6, L0595: 6, H0318: 5, H0494: 5, L0769: 5, L0764: 5, L0779: 5, S0192: 5, H0486: 4, L0770: 4, H0658: 4, S0152: 4, L0751: 4, L0747: 4, L0750: 4, L0777: 4, L0757: 4,

S0242: 4, H0556: 3,
S0408: 3, H0013: 3,
H0620: 3, H0083: 3,
S0250: 3, H0615: 3,
H0213: 3, H0090: 3,
H0268: 3, H0646: 3,
L0800: 3, L0653: 3,
L0809: 3, L0663: 3,
H0689: 3, S3014: 3,
L0749: 3, L0731: 3,
L0596: 3, L0601: 3,
H0657: 2, S0116: 2,
H0341: 2, H0661: 2,
S0418: 2, S0358: 2,
S0045: 2, S0476: 2,
H0393: 2, H0587: 2,
H0574: 2, H0069: 2,
T0048: 2, H0263: 2,
H0544: 2, L0471: 2,
H0673: 2, H0135: 2,
H0591: 2, H0551: 2,
H0412: 2, H0413: 2,
S0440: 2, H0509: 2,
H0131: 2, S0142: 2,
S0002: 2, L0772: 2,
L0662: 2, L5564: 2,
L0655: 2, L0659: 2,
L0647: 2, L0788: 2,
L0664: 2, L0438: 2,
H0519: 2, S0126: 2,

H0672: 2, H0696: 2, S0406: 2, S0027: 2, L0753: 2, S0434: 2, L0587: 2, L0599: 2, L0608: 2, S0196: 2, H0543: 2, H0265: 1, S0040: 1, H0295: 1, H0294: 1, S0218: 1, S0001: 1, H0638: 1, L0534: 1, L0562: 1, S0354: 1, S0410: 1, H0208: 1, S0046: 1, S0132: 1, S0278: 1, H0261: 1, H0549: 1, H0550: 1, S0222: 1, H0610: 1, H0497: 1, H0333: 1, H0632: 1, H0485: 1, H0270: 1, H0156: 1, L0021: 1, S0010: 1, H0581: 1, H0052: 1, H0085: 1, H0596: 1, L0040: 1, H0231: 1, H0546: 1, H0569: 1, H0050: 1, H0012: 1, H0024: 1, H0015: 1, H0594: 1, H0266: 1, H0688: 1, H0622: 1, H0424: 1, L0055: 1, H0038: 1, H0087: 1, T0067: 1,

HKZBB48	1056767	844	230 - 1660	3019			5q23.3-q31.1	121050, 131400, 147061, 147575, 147575,
				Ser-6 to Asp-14, Asp-24 to Glu-32, Asn-56 to Gln-62, Pro-83 to Pro-92, Gly-152 to Glu-169,	H0379: 1, H0264: 1, H0056: 1, H0561: 1, S0450: 1, S0150: 1, H0647: 1, S0144: 1, S0426: 1, L0640: 1, L0763: 1, L0638: 1, L0639: 1, L0637: 1, L0372: 1, L0771: 1, L0773: 1, L0649: 1, L0804: 1, L0650: 1, L0774: 1, L0776: 1, L0807: 1, L0657: 1, L0368: 1, L0791: 1, L0793: 1, L0665: 1, H0144: 1, L0352: 1, H0520: 1, H0435: 1, H0659: 1, H0670: 1, H0648: 1, S0330: 1, H0522: 1, H0631: 1, S0206: 1, L0752: 1, L0755: 1, L0758: 1, L0759: 1, S0260: 1, S0026: 1, H0542: 1, H0422: 1, H0506: 1 and H0008: 1.	L0754: 5, L0758: 5, L0777: 4, L0752: 4, H0574: 3, S0003: 3, L0803: 3, L0790: 3, L0666: 3, H0624: 2,		

	147575, 153455, 159000, 179095, 181460, 192974, 192974, 600807, 601596, 602089
Arg-376 to Lys-384, Glu-393 to Ser-406, Ser-441 to Gly-453.	S0358: 2, S0222: 2, L0369: 2, L0771: 2, L0768: 2, L0804: 2, L0774: 2, L0775: 2, L0776: 2, L0663: 2, H0539: 2, L0742: 2, L0748: 2, L0439: 2, L0750: 2, L0756: 2, L0779: 2, H0170: 1, L0002: 1, L0785: 1, S0356: 1, S0360: 1, H0580: 1, H0411: 1, H0437: 1, H0586: 1, H0497: 1, H0013: 1, L0021: 1, H0263: 1, H0050: 1, S0388: 1, H0060: 1, H0674: 1, H0090: 1, H0591: 1, L0564: 1, S0440: 1, L0648: 1, L0521: 1, L0794: 1, L0806: 1, L0655: 1, L0657: 1, L0783: 1, L0809: 1, L0789: 1, L0664: 1, H0144: 1, H0519: 1, H0689: 1, H0683: 1, H0704: 1, H0555: 1, L0740: 1, L0745: 1, L0749: 1, L0731: 1, L0759: 1 and L0601: 1.

HHAWB19	1056774	845	3 - 1316	3020	Pro-1 to Pro-9.	S0418: 1, H0580: 1, S0278: 1, H0013: 1, H0046: 1 and H0547: 1.	1q42-q44	106150, 106150, 145260, 173870, 173870, 600759, 600996, 601744, 601975
HHATP38	1056786	846	3 - 650	3021	Arg-16 to Arg-22, Ser-52 to Lys-62, Ala-73 to Arg-78, Arg-153 to Leu-169, Arg-172 to Leu-195, Glu-203 to Arg-216.	AR104: 5, AR089: 5, AR060: 2, AR055: 2, AR096: 2, AR061: 1	11q13	102200, 106100, 131100, 131100, 131100, 133780, 147050, 153700, 161015, 164009, 168461, 168461, 168461, 180721, 180840, 191181, 193235, 209901, 232600, 259700, 259770,

HVVBE07	1056801	847	645 - 983	3022	Tyr-47 to Arg-58.	S0053: 3, H0551: 2, S0418: 1, S0046: 1, H0486: 1, H0355: 1, L0771: 1, H0672: 1, S0206: 1, L0605: 1 and S0276: 1.		600045, 600319, 600528, 601884
HKAHB85	1056804	848	1 - 831	3023	Val-212 to Phe-223.	L0731: 9, H0617: 7, L0769: 7, L0809: 6, L0806: 5, S0328: 5, L0745: 4, L0764: 3, L0754: 3, H0624: 2, S0360: 2, H0550: 2, H0333: 2, H0086: 2, H0011: 2, H0266: 2, H0615: 2, H0424: 2, H0494: 2, L0770: 2, L0794: 2, L0649: 2, L0803: 2, L0804: 2, L0774: 2, L0493: 2, L0666: 2, H0658: 2, L0742: 2, L0743: 2, L0747: 2, L0755: 2, L0757: 2, L0591: 2, L0593: 2, L0697: 2, S0424: 2, H0170: 1, H0556: 1, H0294: 1.	19p13.1	143890, 151440, 600173, 600276, 600310, 600310, 601604, 601843

H0341: 1, H0484: 1,
H0483: 1, S0358: 1,
S0376: 1, S0007: 1,
H0370: 1, H0013: 1,
H0706: 1, H0618: 1,
H0253: 1, H0052: 1,
H0085: 1, H0545: 1,
H0012: 1, H0620: 1,
H0024: 1, S0051: 1,
H0687: 1, H0213: 1,
H0031: 1, H0553: 1,
H0181: 1, L0455: 1,
H0334: 1, H0509: 1,
L0772: 1, L0800: 1,
L0768: 1, L0766: 1,
L0805: 1, L0653: 1,
L0776: 1, L0807: 1,
L0658: 1, L0512: 1,
L0659: 1, L0526: 1,
L0783: 1, L0368: 1,
L0789: 1, L0790: 1,
L0665: 1, H0690: 1,
H0435: 1, H0660: 1,
H0539: 1, S0152: 1,
H0521: 1, S0406: 1,
L0751: 1, L0750: 1,
L0779: 1, L0780: 1,
L0752: 1, L0758: 1,
L0587: 1, L0592: 1,
L0599: 1 and L0603: 1.

HUSXA15	1056810	849	303 - 1	3024		2q33-q34	
					S0212: 20, L0751: 14, L0663: 11, L0731: 11, H0083: 10, L0657: 10, L0666: 10, H0547: 10, H0550: 7, H0620: 6, L0769: 6, H0689: 6, H0123: 5, H0428: 5, L0662: 5, S0356: 4, H0059: 4, L0664: 4, H0520: 4, H0670: 4, L0581: 4, S0418: 3, L0717: 3, H0618: 3, H0494: 3, S0438: 3, L0770: 3, L0659: 3, H0683: 3, H0660: 3, L0747: 3, L0758: 3, S0434: 3, H0543: 3, H0624: 2, H0295: 2, H0341: 2, H0662: 2, S0358: 2, S0360: 2, H0675: 2, S0408: 2, H0251: 2, H0051: 2, H0594: 2, H0687: 2, H0615: 2, H0031: 2, H0413: 2, H0100: 2, L0637: 2, L0648: 2, L0803: 2, L0774: 2, L0783: 2, L0665: 2, S0374: 2, S0126: 2, H0658: 2, H0672: 2,		100730, 118800, 123660, 135600, 157655, 186860, 201460, 205100, 213700, 262000, 600258, 601277, 601318

S0378: 2, S0380: 2, S0406: 2, L0439: 2, L0759: 2, L0605: 2, H0352: 2, H0170: 1, H0686: 1, H0685: 1, H0294: 1, S0180: 1, S0298: 1, H0661: 1, H0664: 1, S0420: 1, S0442: 1, S0354: 1, S0376: 1, H0637: 1, H0329: 1, S0007: 1, H0208: 1, H0645: 1, H0549: 1, H0391: 1, H0392: 1, H0331: 1, H0632: 1, T0109: 1, H0575: 1, H0545: 1, H0009: 1, H0024: 1, H0057: 1, H0373: 1, H0188: 1, H0288: 1, H0286: 1, H0644: 1, H0617: 1, H0606: 1, H0087: 1, L0564: 1, S0440: 1, L0772: 1, L0374: 1, L0644: 1, L0794: 1, L0652: 1, L0653: 1, L0809: 1, L0543: 1, H0693: 1, H0593: 1, H0690: 1, H0682: 1, H0684: 1, H0666: 1, S0330: 1,

HNOCH54	1056839	850	1 - 1953	3025	Pro-8 to Glu-16, Lys-29 to Gly-34, Gly-85 to Glu-92, Lys-165 to Glu-172, Glu-180 to Ser-186, Ser-210 to Arg-215, Glu-278 to Gln-288, Lys-377 to Glu-383, Lys-405 to Gly-410, Lys-468 to Glu-474, Asn-483 to Arg-488, Gln-496 to Glu-502, Val-555 to Gly-561, Glu-611 to Pro-623, Lys-631 to Trp-638, Phe-641 to Gly-649.	H0696: 1, H0555: 1, S0027: 1, L0748: 1, L0750: 1, L0779: 1, L0755: 1, H0445: 1, S0436: 1, L0597: 1, L0599: 1, H0542: 1 and S0384: 1.
HOCPP16	1056856	851	1039 - 392	3026	Gly-20 to Tyr-30, Asn-40 to Glu-46, Ser-66 to Gly-75, Lys-85 to Gly-97, Glu-104 to Arg-115, Pro-135 to Pro-140, Pro-150 to Asn-159,	S0212: 20, L0751: 14, L0663: 11, L0731: 11, H0083: 10, L0657: 10, L0666: 10, H0547: 10, H0550: 7, H0620: 6, L0769: 6, H0689: 6, H0123: 5, H0428: 5,

| Leu-167 to Glu-173, Ile-191 to Glu-196, Val-210 to Gln-216. | L0662: 5, S0356: 4, H0059: 4, L0664: 4, H0520: 4, H0670: 4, L0581: 4, S0418: 3, L0717: 3, H0618: 3, H0494: 3, S0438: 3, L0770: 3, L0659: 3, H0683: 3, H0660: 3, L0747: 3, L0758: 3, S0434: 3, H0543: 3, H0624: 2, H0295: 2, H0341: 2, H0662: 2, S0358: 2, S0360: 2, H0675: 2, S0408: 2, H0251: 2, H0051: 2, H0594: 2, H0687: 2, H0615: 2, H0031: 2, H0413: 2, H0100: 2, L0637: 2, L0648: 2, L0803: 2, L0774: 2, L0783: 2, L0665: 2, S0374: 2, S0126: 2, H0658: 2, H0672: 2, S0378: 2, S0406: 2, L0439: 2, L0605: 2, H0352: 2, H0170: 1, H0686: 1, H0685: 1, H0294: 1, S0180: 1, S0298: 1, H0661: 1, H0664: 1, S0420: 1, |

HNOAH83	1056862	852	3 - 848	3027	Val-2 to Val-7.	S0442: 1, S0354: 1, S0376: 1, H0637: 1, H0329: 1, S0007: 1, H0208: 1, H0645: 1, H0549: 1, H0391: 1, H0392: 1, H0331: 1, H0632: 1, T0109: 1, H0575: 1, H0545: 1, H0009: 1, H0024: 1, H0057: 1, H0373: 1, H0188: 1, H0288: 1, H0286: 1, H0644: 1, H0617: 1, H0606: 1, H0087: 1, L0564: 1, S0440: 1, L0772: 1, L0374: 1, L0794: 1, L0652: 1, L0653: 1, L0809: 1, L0543: 1, H0693: 1, H0593: 1, H0690: 1, H0682: 1, H0684: 1, H0666: 1, S0330: 1, S0380: 1, H0696: 1, H0555: 1, S0027: 1, L0748: 1, L0750: 1, L0779: 1, L0755: 1, L0759: 1, H0445: 1, S0436: 1, L0597: 1, L0599: 1, H0542: 1 and S0384: 1.	H0617: 18, H0545: 12,	11p15.5	125852,

L0439: 11, L0743: 10,	126452,
L0751: 10, H0295: 8,	126452,
L0757: 8, S0212: 7,	141900,
S0360: 7, L0662: 7,	141900,
H0551: 6, H0494: 6,	141900,
S0027: 6, L0779: 6,	141900,
H0550: 5, H0575: 5,	141900,
H0253: 5, H0039: 5,	141900,
L0659: 5, H0521: 5,	142000,
L0747: 5, S0408: 4,	142000,
S0046: 4, H0427: 4,	142200,
H0599: 4, H0546: 4,	142250,
H0014: 4, L0764: 4,	142270,
L0774: 4, L0438: 4,	176730,
S0126: 4, H0672: 4,	176730,
L0731: 4, S0434: 4,	176730,
H0255: 3, H0662: 3,	190020,
S0354: 3, S0358: 3,	191290,
S0045: 3, H0370: 3,	192500,
S0280: 3, H0309: 3,	192500,
H0046: 3, H0266: 3,	194071,
H0412: 3, H0413: 3,	194071,
S0440: 3, H0509: 3,	204500,
L0769: 3, L0775: 3,	600856,
L0666: 3, H0520: 3,	601680,
S0330: 3, H0539: 3,	602631,
L0744: 3, L0777: 3,	602631
S0011: 3, S0192: 3,	
H0484: 2, H0661: 2,	
S0420: 2, S0356: 2,	

S0376: 2, S0410: 2,
H0580: 2, S0007: 2,
H0208: 2, S0132: 2,
S0278: 2, H0549: 2,
H0592: 2, H0486: 2,
H0706: 2, H0590: 2,
S0474: 2, H0251: 2,
H0204: 2, H0544: 2,
L0163: 2, H0188: 2,
H0687: 2, H0622: 2,
H0040: 2, H0560: 2,
S0142: 2, S0210: 2,
L0637: 2, L0768: 2,
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L0782: 2, L0783: 2,
L0528: 2, L0663: 2,
S0374: 2, H0547: 2,
H0651: 2, L0602: 2,
H0522: 2, H0555: 2,
L0740: 2, L0754: 2,
L0758: 2, S0196: 2,
H0542: 2, H0624: 1,
H0265: 1, S0040: 1,
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H0294: 1, H0583: 1,
S0180: 1, S0001: 1,
H0663: 1, H0664: 1,
S0418: 1, S0444: 1,
H0675: 1, H0619: 1,
H0392: 1, T0104: 1,

H0587: 1, H0333: 1,
H0559: 1, L0623: 1,
T0040: 1, H0013: 1,
H0069: 1, H0108: 1,
H0036: 1, H0196: 1,
H0052: 1, H0085: 1,
H0205: 1, H0150: 1,
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H0123: 1, H0012: 1,
H0023: 1, H0024: 1,
S0388: 1, S0051: 1,
H0510: 1, H0594: 1,
H0284: 1, H0286: 1,
S0250: 1, H0688: 1,
H0428: 1, T0023: 1,
H0213: 1, H0030: 1,
H0553: 1, L0142: 1,
H0628: 1, H0181: 1,
H0606: 1, H0674: 1,
S0364: 1, H0135: 1,
H0372: 1, H0087: 1,
H0264: 1, H0269: 1,
H0623: 1, H0059: 1,
L0564: 1, H0625: 1,
H0633: 1, H0646: 1,
H0529: 1, L0770: 1,
L3904: 1, L0772: 1,
L0372: 1, L0800: 1,
L0773: 1, L0533: 1,
L0375: 1, L0376: 1,

| HE2OU10 | 1056875 | 853 | 79 - 480 | 3028 | Gln-34 to Ala-45, Glu-47 to Leu-52, Lys-113 to Gln-121. | L0806: 1, L0654: 1, L0629: 1, L0657: 1, L0656: 1, L0809: 1, L0647: 1, L0790: 1, L0665: 1, H0593: 1, H0689: 1, H0690: 1, H0435: 1, H0670: 1, S0328: 1, S0378: 1, S0380: 1, H0696: 1, S0406: 1, H0478: 1, H0631: 1, S3012: 1, S0028: 1, S0206: 1, L0750: 1, L0755: 1, L0759: 1, L0596: 1, L0597: 1, S0026: 1, H0665: 1, H0543: 1 and S0424: 1. L0743: 4, L0749: 4, L0731: 4, H0265: 2, H0213: 2, H0169: 2, H0038: 2, H0543: 2, H0170: 1, H0556: 1, H0341: 1, H0661: 1, S0420: 1, S0360: 1, H0639: 1, H0438: 1, H0036: 1, H0253: 1, S0010: 1, H0052: 1, H0327: 1, H0530: 1, H0009: 1, L0471: 1, H0644: 1, L0055: 1, | 22q13.2-q13.31 | 188826, 250100, 250800, 250800 |

HODGM46	1056927	854	884 - 738	3029		S0144: 1, S0002: 1, L0775: 1, H0691: 1, H0659: 1, H0648: 1, S0350: 1, S3012: 1, L0748: 1, L0740: 1, L0754: 1, L0747: 1, L0750: 1, L0753: 1, L0755: 1, L0758: 1 and S0276: 1.		
HODFR44	1056990	855	2 - 469	3029	Ser-13 to His-19, Gly-41 to Arg-49.	H0615: 3		
				3030	Arg-17 to Lys-33.	AR055: 28, AR053: 28, AR033: 26, AR052: 22, AR089: 20, AR061: 13, AR060: 13, AR039: 11, AR096: 10, AR104: 5; L0751: 4, L0439: 3, L0777: 3, L0779: 2, L0758: 2, H0650: 1, H0615: 1, H0328: 1, L0435: 1, L0769: 1, L0649: 1, L0650: 1, L0774: 1, L0376: 1, L0789: 1 and H0343: 1.		
HCHND12	1057009	856	100 - 333	3031	Arg-27 to Trp-35.	H0664: 9, H0370: 8, H0059: 8, H0483: 4, S0410: 4, L0751: 4, L0747: 4, L0750: 4, H0484: 3, L0664: 3,	17q11.2-17q12	144200, 148066, 148066, 148067, 148067,

148069,
154275,
162200,
162200,
180240,
182138,
239100,
600119,
600119,
600881,
601363,
601687,
601954,
602403

L0749: 3, H0661: 2,
S0418: 2, S0408: 2,
H0246: 2, H0615: 2,
H0617: 2, L0637: 2,
L0766: 2, L0659: 2,
L0783: 2, L0665: 2,
S0374: 2, H0682: 2,
H0666: 2, L0754: 2,
L0759: 2, L0596: 2,
H0506: 2, H0624: 1,
S0114: 1, S0420: 1,
S0354: 1, S0358: 1,
S0376: 1, H0675: 1,
S0222: 1, H0156: 1,
H0590: 1, H0196: 1,
L0040: 1, H0597: 1,
H0457: 1, H0188: 1,
H0688: 1, H0622: 1,
H0424: 1, H0030: 1,
H0553: 1, H0644: 1,
H0673: 1, H0124: 1,
S0440: 1, S0472: 1,
H0647: 1, L0640: 1,
L0772: 1, L0764: 1,
L0765: 1, L0650: 1,
L0375: 1, L0776: 1,
L0792: 1, L0666: 1,
H0690: 1, H0435: 1,
H0670: 1, H0648: 1,
S0404: 1, L0755: 1,

HBHAC29	1057157	857	2 - 553	3032		L0731: 1, L0605: 1 and L0600: 1.	S0051: 4, H0441:3, S0036: 3, L0769: 3, L0438: 3, L0439: 3, H0687: 2, L0665: 2, S0031: 2, S6024: 1, S0029: 1, H0455: 1, H0052: 1, L0638: 1, L0639: 1, S0053: 1 and L0742: 1.	19q13.1	164731, 172400, 172400, 180901, 180901, 221770, 248600, 600918, 602716
HTPFW87	1057170	858	2 - 2206	3033	Ala-65 to Gly-77, Leu-79 to Lys-85, Gln-95 to Asp-103, Gln-113 to Ser-119, Ser-230 to Gly-235, Lys-358 to Phe-368, Gln-397 to Thr-407, Pro-474 to Val-484, Asn-494 to Asp-505, Glu-513 to Gly-521, Ser-532 to Arg-539, Thr-557 to Thr-562, Pro-566 to Glu-571, Pro-577 to Glu-582.	H0622: 42, S0380: 10, S0368: 3, H0040: 1, H0519: 1 and S0378: 1.		
HISAF60	1057212	859	2 - 988	3034	Arg-8 to Pro-18, Asp-76 to Arg-83, Glu-85 to Thr-94, Arg-139 to Ile-145,	AR039: 13, AR033: 12, AR104: 11, AR053: 10, AR055: 9, AR052: 9, AR089: 9, AR096:		

| Gln-180 to Asp-196, Thr-201 to Ser-213, Lys-230 to Gln-235, Asn-293 to Gly-309, Thr-315 to Phe-321. | 8, AR060: 5, AR061: 3 | L0731: 12, L0747: 9, H0651: 5, L0759: 5, H0644: 4, H0013: 3, L0748: 3, L0439: 3, L0779: 3, H0575: 2, H0052: 2, H0327: 2, H0050: 2, H0083: 2, L0769: 2, L0662: 2, L0438: 2, H0539: 2, L0743: 2, L0750: 2, L0588: 2, H0716: 1, L0002: 1, L0443: 1, S0001: 1, S0360: 1, H0645: 1, H0411: 1, H0587: 1, H0333: 1, H0486: 1, S0010: 1, S0050: 1, H0051: 1, H0428: 1, H0553: 1, H0032: 1, L0455: 1, S0036: 1, H0038: 1, H0412: 1, H0413: 1, H0100: 1, T0042: 1, L0770: 1, L0637: 1, L0766: 1, L0649: 1, L0774: 1, L0776: 1, L0655: 1, L0659: 1, L0783: 1, L0529: 1, L5623: 1, L0790: 1, |

					L0791: 1, H0520: 1, H0519: 1, H0593: 1, H0689: 1, H0670: 1, H0672: 1, H0696: 1, S3014: 1, L0741: 1, L0744: 1, L0757: 1, L0608: 1 and S0398: 1.			106165, 117700, 117700, 165500, 169600, 180380,
HRABO80	1057219	860	1521 - 1937	3035	Ala-1 to Ser-7, Gln-108 to Ser-117.	L0743: 4, L0751: 4, H0252: 3, L0659: 3, H0586: 2, H0135: 2, H0038: 2, L0438: 2, H0670: 2, L0779: 2, H0624: 1, S0430: 1, S0222: 1, H0052: 1, L0471: 1, T0010: 1, H0428: 1, H0616: 1, T0067: 1, L0564: 1, H0646: 1, L0662: 1, L0774: 1, L0783: 1, H0144: 1, S0126: 1, H0660: 1, H0651: 1, H0555: 1, L0749: 1, L0750: 1, L0752: 1, L0758: 1 and S0194: 1.		
HADDF30	1057260	861	1 - 1155	3036	Arg-49 to Leu-55, Arg-61 to Cys-69, Arg-87 to Arg-102, Asn-119 to Lys-125, Cys-132 to Met-151, Ser-157 to Glu-164,	L0777: 3, L0803: 2, L0774: 2, L0602: 2, L0596: 2, L0588: 2, S0376: 1, H0431: 1, H0427: 1, H0266: 1, H0328: 1, H0615: 1,	3q24-q28	

| HDAAS58 | 10057272 | 862 | 245 - 460 | 3037 | Asn-37 to Arg-45.

Asn-187 to Glu-210, Glu-235 to Thr-243, Lys-245 to Val-251, His-256 to Ser-268, Ser-277 to Ser-288, Leu-303 to Glu-317, Glu-328 to Gln-341, Ser-350 to Leu-355, Ser-357 to Asn-364. | AR096: 4, AR089: 2,
AR033: 2, AR060: 1,
AR053: 1, AR055: 1,
AR061: 1, AR104: 1,
AR039: 0, AR052: 0
H0052: 4, L0768: 3,
L0766: 3, L0438: 3,
L0748: 3, L0750: 3,
H0657: 2, H0341: 2,
H0484: 2, T0042: 2,
L0665: 2, H0658: 2,
L0743: 2, L0744: 2,
L0756: 2, L0777: 2,
H0556: 1, H0656: 1,
S0420: 1, H0393: 1,
L0717: 1, S0222: 1,
H0497: 1, H0486: 1,
H0013: 1, H0263: 1,
N0006: 1, L0579: 1,
H0620: 1, L0163: 1,
H0594: 1, H0267: 1,

L0523: 1, L0659: 1,
L0809: 1, L0666: 1,
H0660: 1, S0378: 1 and
L0750: 1. | 180380,
180380,
276902,
600700,
601199,
601199,
601199,
601682 |

ID					Amino acids	Clones	Chromosome	IDs
						H0615: 1, H0688: 1, H0494: 1, H0538: 1, L0769: 1, L0772: 1, L0643: 1, L0794: 1, L0649: 1, L0804: 1, L0774: 1, L0375: 1, L0776: 1, L0789: 1, L0792: 1, L0666: 1, H0144: 1, H0520: 1, H0711: 1, H0690: 1, L0439: 1, L0754: 1, L0745: 1, L0747: 1, L0786: 1, L0780: 1, L0752: 1, H0542: 1 and H0352: 1.		
HSDZG15	1057307	863	3 - 737	3038	Thr-92 to Gln-106, Val-222 to Val-227, Glu-229 to Asp-245.	H0556: 1, H0455: 1 and H0660: 1.		
HPDVY52	1057393	864	3 - 1391	3039		H0550: 3, L0751: 3, S0356: 2, H0024: 2, H0059: 2, H0690: 2, H0689: 2, H0014: 2, H0661: 1, H0645: 1, H0549: 1, H0052: 1, H0172: 1, H0123: 1, H0081: 1, H0266: 1, H0288: 1, H0553: 1, H0135: 1, H0494: 1, H0646: 1, L0649: 1, H0593: 1, H0682: 1,	20q13.2-q13.3	118504, 118504, 131242, 139320, 139320, 139320, 139320, 602025, 602235

					H0658: 1, H0672: 1, H0555: 1, L0439: 1, L0747: 1, S0276: 1 and H0506: 1.	---
HHESW02	1057478	865	2 - 1252	3040	Arg-20 to Gly-28, Glu-41 to Asn-55, Asp-62 to Thr-74, Glu-105 to Thr-118, Ala-144 to Ser-158, Gln-200 to Glu-205, Cys-212 to Gly-217, Pro-231 to Phe-238, Gln-259 to Glu-264, Glu-282 to Tyr-288, Lys-300 to Asn-305, His-351 to Thr-358, Arg-399 to Cys-407.	H0556: 7, H0543: 7, H0265: 3, S0278: 3, S0002: 3, H0445: 3, H0657: 2, H0663: 2, H0580: 2, S0003: 2, H0090: 2, S0144: 2, S0152: 2, S0206: 2, H0542: 2, H0656: 1, H0125: 1, H0351: 1, H0575: 1, S0182: 1, H0023: 1, H0373: 1, H0375: 1, H0591: 1, H0040: 1, H0264: 1, T0041: 1, T0042: 1, S0142: 1, H0521: 1, H0214: 1, H0436: 1, L0750: 1, L0757: 1, S0242: 1, H0423: 1 and H0422: 1.
HVVBW84	1057561	866	327 - 1625	3041	Cys-24 to Gly-35, Ala-42 to Glu-47, Gln-181 to Asp-188, Val-264 to Pro-270, Asn-289 to Gly-294, Leu-325 to Tyr-330, Gly-353 to Leu-360,	L0751: 19, L0659: 9, H0550: 8, H0545: 6, --- S0360: 5, H0620: 5, H0309: 4, H0050: 4, H0135: 4, L0754: 4, L0747: 4, L0731: 4, H0170: 3, H0253: 3,

Asn-379 to Asp-388.	H0024: 3, H0687: 3, H0124: 3, L0375: 3, H0144: 3, H0672: 3, S0196: 3, H0619: 2, H0586: 2, H0427: 2, H0546: 2, H0622: 2, H0628: 2, H0087: 2, H0100: 2, L0764: 2, L0519: 2, L0664: 2, S0028: 2, L0439: 2, L0758: 2, L0759: 2, H0343: 2, S0192: 2, S0212: 1, H0663: 1, H0662: 1, S0356: 1, H0208: 1, S0300: 1, H0549: 1, S0222: 1, H0392: 1, H0592: 1, H0618: 1, H0196: 1, H0052: 1, H0251: 1, H0232: 1, H0544: 1, H0041: 1, H0188: 1, S0250: 1, L0053: 1, H0031: 1, H0553: 1, H0644: 1, H0674: 1, H0163: 1, H0090: 1, H0477: 1, L0770: 1, L0644: 1, L0648: 1, L0662: 1, L0806: 1, L0776: 1, L0542: 1, L0546: 1, L0783: 1,

HEAAC39	1057603	867	1365 - 1511	3042	Arg-12 to Gln-25, Gly-31 to Gly-38.	L0789: 1, L0666: 1, L0663: 1, L0438: 1, H0684: 1, H0651: 1, S0044: 1, L0744: 1, L0584: 1, L0485: 1, L0361: 1, S0194: 1 and H0008: 1. AR039: 5, AR053: 5, AR089: 4, AR060: 3, AR061: 3, AR055: 2, AR096: 1, AR033: 1, AR104: 0 L0747: 4, L0777: 3, L0657: 2, L0759: 2, L0811: 1, H0369: 1, L0021: 1, S0346: 1, H0009: 1, L0637: 1, L0772: 1, L0375: 1, L0783: 1, L0809: 1, H0659: 1, H0660: 1, L0731: 1 and L0758: 1.
HSLJC80	1057797	868	143 - 1945	3043	His-12 to Ala-26, Ser-70 to Glu-78, Pro-87 to Pro-94.	AR055: 5, AR060: 5, AR061: 5, AR052: 4, AR033: 4, AR089: 3, AR053: 3, AR096: 3, AR039: 2, AR104: 2, AR104: 1 H0550: 9, H0651: 6, S0358: 5, L0659: 5, H0549: 3, H0586: 3, L0662: 3, L0794: 3,

HEOAD12	1057842	869	332 - 934	3044	
					L0777: 3, H0575: 2, L0649: 2, L0744: 2, L0756: 2, L0758: 2, H0739: 1, H0716: 1, H0662: 1, H0587: 1, H0706: 1, H0050: 1, H0018: 1, H0200: 1, H0188: 1, H0687: 1, H0644: 1, H0628: 1, H0163: 1, H0100: 1, L0770: 1, L0809: 1, L0788: 1, L0663: 1, H0696: 1, S0406: 1, S0390: 1 and L0749: 1. AR052: 10, AR096: 6, AR053: 4, AR033: 4, AR089: 4, AR039: 4, AR060: 4, AR104: 3, AR055: 3, AR061: 2 L0659: 11, L0665: 11, L0666: 9, L0752: 9, L0731: 9, H0623: 7, L0663: 7, H0658: 7, L0743: 7, L0750: 7, L0662: 6, L0758: 6, L0759: 6, S0045: 5, S0046: 5, H0412: 5, L0776: 5, L0655: 5, L0779: 5, H0437: 4, H0457: 4, L0747: 4,

H0422: 4, L0005: 3,
S0376: 3, H0411: 3,
S0222: 3, H0266: 3,
H0553: 3, H0056: 3,
L0667: 3, L0764: 3,
L0794: 3, L0803: 3,
H0436: 3, L0588: 3,
L0599: 3, H0543: 3,
H0624: 2, H0657: 2,
S0116: 2, H0580: 2,
H0013: 2, H0439: 2,
L0471: 2, L0483: 2,
H0413: 2, S0344: 2,
L0598: 2, L0763: 2,
L0771: 2, L0775: 2,
L0809: 2, S0374: 2,
H0670: 2, H0648: 2,
S0328: 2, S0330: 2,
S0136: 2, H0696: 2,
S0404: 2, S0028: 2,
L0751: 2, L0745: 2,
L0755: 2, H0170: 1,
H0171: 1, H0583: 1,
H0662: 1, H0402: 1,
S0442: 1, S0444: 1,
S0360: 1, H0722: 1,
S0300: 1, H0351: 1,
S0278: 1, H0431: 1,
H0592: 1, H0333: 1,
H0486: 1, H0635: 1,

| HVVBT41 | 1057880 | 870 | 214 - 1272 | 3045 | Leu-1 to Lys-7,
Arg-27 to Glu-33,
Ala-43 to Gly-66,
Ser-78 to Ser-84,
Gly-111 to Val-118, | H0318: 1, S0474: 1,
H0581: 1, H0421: 1,
H0434: 1, H0251: 1,
H0150: 1, H0024: 1,
H0594: 1, H0179: 1,
H0687: 1, H0119: 1,
H0644: 1, H0628: 1,
S0036: 1, H0038: 1,
H0634: 1, T0067: 1,
H0433: 1, H0269: 1,
H0100: 1, L0065: 1,
L0369: 1, L0770: 1,
L0648: 1, L0521: 1,
L0766: 1, L0804: 1,
L0650: 1, L0651: 1,
L0632: 1, L0806: 1,
L0517: 1, L0518: 1,
L0783: 1, L0647: 1,
L0664: 1, H0693: 1,
H0547: 1, H0659: 1,
S0380: 1, H0710: 1,
S0190: 1, H0727: 1,
L0754: 1, L0756: 1,
L0592: 1, H0667: 1,
H0136: 1 and S0276: 1. |

| HAZAE42 | 1057915 | 871 | 3 - 659 | 3046 | Glu-140 to Lys-145, Lys-163 to Asp-168, Lys-189 to Phe-197, Arg-257 to Leu-264, Gln-285 to Asp-292, Gly-298 to Ala-308, Arg-314 to Glu-323, Gly-329 to Gly-338, Ser-343 to Leu-353.
Pro-8 to Gly-18, Pro-57 to Ser-67, Lys-183 to Trp-191. | L0768: 7, L0750: 6, L0783: 5, H0687: 4, H0428: 4, L0770: 4, H0672: 4, H0031: 3, L0767: 3, L0776: 3, L0665: 3, H0539: 3, L0749: 3, L0755: 3, L0731: 3, L0759: 3, L0608: 3, H0333: 2, H0046: 2, H0009: 2, T0006: 2, H0644: 2, H0059: 2, L0386: 2, L0805: 2, L0809: 2, H0547: 2, L0742: 2, L0747: 2, L0779: 2, L0752: 2, H0624: 1, H0686: 1, H0656: 1, L0778: 1, H0662: 1, H0393: 1, H0369: 1, H0550: 1, H0441: 1, H0574: 1, H0632: 1 |

Gene					Amino acid ranges	Clones	Cytogenetic	OMIM
HPRBN60	1057948	872	3 - 1019	3047	Phe-1 to Cys-8, Ala-10 to Gly-23, Gln-114 to Lys-120, Glu-129 to Phe-135, Ile-155 to Gln-160, Ser-193 to Thr-199, Asp-214 to Gly-226, Asp-236 to Gly-245, Ala-283 to Arg-288, Ala-322 to Asp-331.	H0421: 1, H0544: 1, H0123: 1, L0471: 1, H0012: 1, H0356: 1, H0213: 1, H0087: 1, T0069: 1, H0100: 1, H0494: 1, H0509: 1, H0646: 1, S0210: 1, L0520: 1, L0625: 1, L0763: 1, L0371: 1, L0764: 1, L0794: 1, L0774: 1, L0633: 1, L0655: 1, L0807: 1, L0537: 1, H0144: 1, H0691: 1, H0520: 1, H0690: 1, H0670: 1, S0328: 1, S0378: 1, S0380: 1, L0777: 1, L0780: 1, L0753: 1, L0758: 1 and L0697: 1. L0439: 9, H0550: 6, S0366: 6, S0364: 4, H0644: 3, S0358: 2, H0549: 2, H0645: 1, S0222: 1, H0370: 1, H0050: 1, L0471: 1, S0362: 1, H0039: 1, H0032: 1, H0212: 1, H0379: 1, L0438: 1 and S0044: 1.	4q35	158900, 229000, 264900
HOVCZ68	1057958	873	1 - 987	3048	Arg-20 to Arg-26,	H0574: 5, S0126: 4,		

H6EDF71	10057979	874	2 - 1120	3049			3q13.1-q13.2	600467, 600882
					Ser-47 to Thr-59, Val-83 to Cys-91, Asn-94 to Arg-100, Asp-120 to Asn-126, Cys-135 to Glu-140, Gln-146 to Cys-153, Pro-184 to Gln-189, Lys-246 to Cys-252, Cys-259 to Asp-265, Ile-304 to Tyr-319.	L0748: 4, L0777: 4, L0759: 4, T0039: 3, H0428: 3, H0644: 3, S0194: 3, H0393: 2, H0331: 2, H0632: 2, L0021: 2, L0632: 2, L0805: 2, L0776: 2, H0436: 2, L0779: 2, H0171: 1, H0685: 1, H0661: 1, S0132: 1, H0333: 1, H0013: 1, H0546: 1, H0011: 1, H0024: 1, S0250: 1, H0038: 1, H0551: 1, T0067: 1, H0494: 1, S0210: 1, L0761: 1, L0794: 1, L0517: 1, L0790: 1, L0791: 1, L0665: 1, H0144: 1, H0689: 1, S0152: 1, L0747: 1, H0653: 1, S0192: 1, S0276: 1 and S0196: 1.		
					Asp-17 to Gly-23, Lys-89 to Asp-94, Lys-129 to Asp-134, Leu-195 to Glu-204.	L0777: 6, L0666: 3, H0648: 3, H0672: 3, L0747: 3, H0685: 2, S0376: 2, H0553: 2, S0440: 2, H0529: 2, L0775: 2, L0788: 2, L0665: 2, S0152: 2,		

HCOOF60	1058001	875	1 - 855	3050	Gly-28 to Ser-36, Trp-38 to Pro-60, Pro-98 to Thr-104, Pro-113 to Tyr-118, Phe-133 to Gly-140, Pro-186 to Leu-192, Glu-239 to Gly-246, Pro-257 to Lys-269, Lys-273 to Lys-279.	17	L0599: 2, H0624: 1, H0265: 1, H0222: 1, H0713: 1, H0638: 1, S0354: 1, S0360: 1, S0408: 1, H0370: 1, H0559: 1, H0486: 1, H0581: 1, H0567: 1, H0083: 1, S0003: 1, H0674: 1, H0090: 1, L0475: 1, S0438: 1, S0002: 1, L0646: 1, L0521: 1, L0766: 1, L0651: 1, L0783: 1, L0663: 1, S0374: 1, H0519: 1, H0658: 1, H0696: 1, S0044: 1, S0406: 1, L0750: 1, L0755: 1, H0445: 1, L0366: 1, H0667: 1, S0276: 1, H0543: 1, H0423: 1 and H0506: 1.	L0499: 33, L0493: 25, L0514: 10, H0484: 8, H0620: 6, L0769: 6, S0418: 5, S0356: 5, L0766: 5, L0515: 5, L0747: 5, L0779: 5, H0543: 5, H0559: 4, H0618: 4, H0617: 4, H0087: 4, S0422: 4,

L0497: 4, L0509: 4,
S0376: 3, H0546: 3,
H0424: 3, H0551: 3,
L0504: 3, H0686: 2,
H0545: 2, H0571: 2,
H0412: 2, L0507: 2,
L0773: 2, L0512: 2,
L0783: 2, S0126: 2,
L0592: 2, H0136: 2,
H0624: 1, H0170: 1,
H0171: 1, H0556: 1,
S0342: 1, H0341: 1,
H0483: 1, H0663: 1,
H0305: 1, H0638: 1,
S0420: 1, S0444: 1,
S0408: 1, H0438: 1,
H0333: 1, H0257: 1,
T0039: 1, T0109: 1,
H0013: 1, H0253: 1,
H0251: 1, H0544: 1,
H0083: 1, H0288: 1,
H0622: 1, H0213: 1,
H0068: 1, H0163: 1,
H0634: 1, H0616: 1,
H0100: 1, T0041: 1,
H0641: 1, L0763: 1,
L0638: 1, L0639: 1,
L0646: 1, L0644: 1,
L0648: 1, L0662: 1,
L0768: 1, L5564: 1,

| HVVBH81 | 1058059 | 876 | 3522 - 1090 | 3051 | Glu-20 to Leu-35, Asp-48 to Gly-54. | L0498: 1, L0806: 1, L0653: 1, L0655: 1, L0606: 1, L0629: 1, L0510: 1, L0511: 1, L0656: 1, L0665: 1, S0052: 1, H0690: 1, H0670: 1, S0328: 1, H0539: 1, S0152: 1, H0521: 1, S0406: 1, L0742: 1, L0748: 1, L0751: 1, L0731: 1, L0758: 1, S0436: 1, L0097: 1, H0542: 1, L0698: 1 and H0506: 1. | H0547: 14, H0519: 13, L0803: 12, L0754: 12, H0543: 12, L0794: 10, H0423: 10, H0521: 9, L0748: 9, H0013: 8, L0805: 8, H0046: 7, H0266: 7, S0022: 7, L0439: 7, L0758: 7, L0599: 7, L0471: 6, L0666: 6, L0663: 6, L0731: 6, H0553: 5, H0040: 5, S0422: 5, S0002: 5, H0529: 5, L0659: 5, H0435: 5, S0152: 5, L0750: 5, L0752: 5, L0596: 5, |

L0591: 5, L0608: 5,
H0170: 4, S0358: 4,
S0360: 4, L0717: 4,
S0222: 4, H0486: 4,
H0318: 4, H0038: 4,
H0494: 4, L0770: 4,
L0761: 4, L0766: 4,
L0804: 4, L0774: 4,
L0809: 4, L0519: 4,
S0406: 4, L0747: 4,
H0445: 4, L0588: 4,
H0717: 3, H0657: 3,
S0212: 3, H0661: 3,
H0580: 3, H0592: 3,
H0587: 3, H0083: 3,
H0428: 3, H0674: 3,
H0560: 3, L0598: 3,
L0369: 3, L0769: 3,
L0646: 3, L0649: 3,
L0776: 3, L0527: 3,
L0790: 3, L0665: 3,
H0144: 3, H0520: 3,
S0380: 3, L0602: 3,
H0522: 3, S0028: 3,
L0740: 3, L0749: 3,
L0756: 3, H0136: 3,
H0506: 3, H0624: 2,
H0171: 2, S6024: 2,
H0583: 2, H0381: 2,
H0662: 2, S0418: 2,

S0420: 2,	S0356: 2,
S0476: 2,	H0619: 2,
H0431: 2,	H0333: 2,
T0109: 2,	H0075: 2,
H0599: 2,	H0581: 2,
H0052: 2,	N0006: 2,
H0179: 2,	T0023: 2,
H0644: 2,	H0412: 2,
H0100: 2,	H0561: 2,
H0641: 2,	S0144: 2,
S0344: 2,	H0538: 2,
S0426: 2,	L0500: 2,
L0638: 2,	L0372: 2,
L0497: 2,	L0650: 2,
L0664: 2,	L0438: 2,
L0352: 2,	S0126: 2,
H0660: 2,	H0648: 2,
H0672: 2,	H0436: 2,
S3014: 2,	L0786: 2,
L0779: 2,	L0755: 2,
L0759: 2,	L0362: 2,
L0361: 2,	L0601: 2,
S0026: 2,	H0667: 2,
S0192: 2,	H0542: 2,
H0422: 2,	L0600: 2,
H0556: 1,	T0002: 1,
H0159: 1,	S0114: 1,
S0134: 1,	H0650: 1,
H0656: 1,	S0116: 1,
S0001: 1,	H0484: 1,

H0589: 1, H0458: 1,
H0459: 1, H0638: 1,
L0005: 1, S0442: 1,
S0376: 1, S0444: 1,
S0408: 1, S0410: 1,
H0489: 1, H0637: 1,
S0007: 1, S0045: 1,
S0046: 1, S0140: 1,
L0476: 1, H0411: 1,
S0278: 1, H0550: 1,
H0441: 1, H0404: 1,
H0600: 1, H0574: 1,
H0485: 1, T0039: 1,
T0040: 1, L0586: 1,
H0069: 1, H0427: 1,
S0280: 1, L0021: 1,
H0098: 1, H0575: 1,
H0004: 1, S0010: 1,
S0346: 1, L0105: 1,
S0474: 1, S0049: 1,
H0251: 1, H0309: 1,
T0115: 1, L0738: 1,
H0530: 1, L0041: 1,
H0009: 1, H0562: 1,
H0172: 1, H0620: 1,
H0199: 1, H0024: 1,
H0057: 1, H0014: 1,
H0051: 1, S0051: 1,
H0355: 1, H0510: 1,
S6028: 1, H0267: 1,

S0318: 1, S0316: 1,
H0687: 1, S0003: 1,
H0328: 1, H0039: 1,
H0622: 1, L0194: 1,
H0030: 1, H0031: 1,
L0142: 1, H0617: 1,
H0169: 1, L0455: 1,
H0124: 1, H0316: 1,
H0090: 1, H0591: 1,
H0551: 1, H0488: 1,
H0413: 1, T0004: 1,
T0041: 1, T0042: 1,
L0475: 1, H0625: 1,
S0370: 1, S0464: 1,
S0440: 1, H0509: 1,
S0150: 1, H0130: 1,
S0208: 1, UNKWN: 1,
L0520: 1, L0763: 1,
L0631: 1, L0637: 1,
L5575: 1, L0641: 1,
L0771: 1, L0773: 1,
L0648: 1, L0521: 1,
L0662: 1, L0767: 1,
L0775: 1, L0378: 1,
L0806: 1, L0606: 1,
L0661: 1, L0657: 1,
L0542: 1, L0384: 1,
L0528: 1, L0647: 1,
L0367: 1, L0787: 1,
L0789: 1, L0532: 1,

HSPTJ51	1058172	877	3 - 1004	3052			3p23-p21	
					Gly-6 to Gly-15,	H0697: 1, H0702: 1,		139330,
					Pro-17 to Leu-22,	H0699: 1, S0374: 1,		139360,
					Trp-25 to Leu-70,	H0723: 1, H0689: 1,		150250,
					Asp-72 to Val-86,	H0682: 1, H0659: 1,		164500,
					Asp-151 to Asn-170,	H0658: 1, H0670: 1,		182280,
					Ala-183 to Gln-198,	S0328: 1, H0539: 1,		227646,
					Pro-221 to Pro-227,	H0710: 1, H0696: 1,		261510,
					Pro-236 to Gly-244,	H0215: 1, H0631: 1,		600163,
					Pro-272 to Gly-281,	L0751: 1, L0777: 1,		600971,
					Pro-304 to Asp-318.	L0753: 1, L0757: 1,		601154,
						S0031: 1, S0260: 1,		601226,
						L0686: 1, H0707: 1,		601267,
						S0434: 1, S0436: 1,		601373
						L0480: 1, L0589: 1,		
						L0605: 1, L0595: 1 and		
						S0011: 1.		
						H0683: 39, L0731: 9,		
						S0422: 7, L0748: 7,		
						L0747: 6, H0013: 5,		
						L0794: 4, L0805: 4,		
						L0754: 4, L0779: 4,		
						L0759: 4, H0650: 3,		
						H0318: 3, H0046: 3,		
						L0662: 3, S0328: 3,		
						L0439: 3, L0740: 3,		
						L0749: 3, L0777: 3,		
						L0758: 3, L0593: 3,		
						H0170: 2, H0341: 2,		
						H0662: 2, S0442: 2,		
						S0046: 2, L0717: 2,		

H0169: 2, H0090: 2, H0413: 2, S0002: 2, L0372: 2, L0363: 2, L0768: 2, L0766: 2, S0374: 2, L0438: 2, H0547: 2, L0602: 2, L0743: 2, L0750: 2, L0780: 2, H0423: 2, H0422: 2, S0424: 2, H0265: 1, S0212: 1, S0444: 1, S0360: 1, H0733: 1, H0351: 1, H0270: 1, L0586: 1, H0635: 1, H0097: 1, H0421: 1, H0546: 1, H0399: 1, H0266: 1, H0615: 1, H0428: 1, H0553: 1, L0055: 1, H0673: 1, H0124: 1, H0708: 1, H0591: 1, H0040: 1, H0551: 1, H0488: 1, H0623: 1, H0561: 1, S0306: 1, S0438: 1, H0647: 1, S0344: 1, H0529: 1, L0506: 1, L0763: 1, L0770: 1, L0769: 1, L0637: 1, L0761: 1, L0646: 1, L0803: 1, L0375: 1, L0651: 1,

HOPKC80	1058174	878	240 - 980	3053	Pro-1 to Ser-6, Pro-25 to Cys-31, Arg-142 to Lys-150, Pro-223 to Arg-232.	L0776: 1, L0659: 1, L0793: 1, L0666: 1, L0663: 1, L0664: 1, L0665: 1, H0144: 1, H0693: 1, H0520: 1, H0519: 1, H0682: 1, H0658: 1, H0670: 1, S0330: 1, S0380: 1, H0696: 1, S0146: 1, H0631: 1, H0345: 1, S0027: 1, L0744: 1, S0260: 1, H0445: 1, H0707: 1, L0595: 1, L0366: 1, S0011: 1, H0668: 1, H0543: 1, L0697: 1, S0398: 1, S0452: 1 and H0352: 1. S0408: 20, L0751: 11, S0358: 8, S0442: 5, S0444: 5, L0775: 5, L0776: 5, S0440: 4, L0659: 4, L0666: 4, L0755: 4, L0596: 4, S0356: 3, S0376: 3, L0771: 3, L0768: 3, L0774: 3, L0743: 3, L0748: 3, H0550: 2, L0373: 2, L0372: 2, L0665: 2, S0374: 2, H0684: 2, H0648: 2,	17p13	138190, 254210, 271900, 600179, 600977, 601202, 601777

HOCPT58	1058250	879	1 - 765	3054	Ala-3 to Val-8, Ser-97 to Leu-104, Asp-106 to Thr-113, Ala-124 to Ser-129, Pro-136 to Gly-152, Pro-156 to Leu-167, His-176 to His-182, Thr-188 to Ser-194, Pro-200 to Tyr-205, Arg-208 to Glu-214,	H0618: 10, L0809: 7, H0713: 3, H0619: 3, H0052: 3, S0126: 3, L0748: 3, L0754: 3, L0745: 3, L0750: 3, H0716: 2, H0550: 2, H0392: 2, H0253: 2, H0687: 2, H0040: 2, H0551: 2, H0264: 2, L0800: 2, L0764: 2,	H0672: 2, S0392: 2, L0750: 2, L0752: 2, L0599: 2, H0295: 1, S0360: 1, S0410: 1, S0132: 1, H0549: 1, H0574: 1, L0021: 1, H0590: 1, H0085: 1, H0204: 1, H0150: 1, H0039: 1, H0617: 1, H0130: 1, L0764: 1, L0773: 1, L0648: 1, L0653: 1, L0657: 1, L0783: 1, L0383: 1, L0519: 1, L0791: 1, L0792: 1, L0663: 1, H0435: 1, H0659: 1, H0670: 1, H0696: 1, S0404: 1, S0406: 1, L0777: 1, L0759: 1 and S0434: 1.

Arg-239 to Gly-245. L0774: 2, H0660: 2, S0378: 2, S3014: 2, L0751: 2, L0749: 2, L0779: 2, L0758: 2, L0759: 2, H0295: 1, H0583: 1, S0212: 1, H0484: 1, H0255: 1, S0442: 1, S0358: 1, S0444: 1, S0360: 1, H0549: 1, H0333: 1, L0622: 1, H0486: 1, T0060: 1, H0427: 1, L0021: 1, H0194: 1, H0309: 1, H0546: 1, H0050: 1, L0471: 1, H0051: 1, S0388: 1, H0399: 1, H0375: 1, H0252: 1, H0428: 1, H0039: 1, H0553: 1, H0163: 1, H0616: 1, H0087: 1, H0494: 1, H0714: 1, S0438: 1, S0440: 1, H0633: 1, H0646: 1, S0144: 1, S0002: 1, S0426: 1, L0639: 1, L5566: 1, L0772: 1, L0648: 1, L0386: 1, L0650: 1, L0653: 1, L0655: 1, L0657: 1, L0659: 1,

WO 02/00677   PCT/US01/18569

| HPCTP25 | 1058287 | 880 | 3 - 1553 | 3055 | Ser-89 to Met-94,
Val-331 to Lys-339,
Leu-344 to Met-350,
Glu-386 to Tyr-394,
Phe-480 to Gly-493. | L0789: 1, L0793: 1,
L0664: 1, H0144: 1,
H0593: 1, H0682: 1,
H0670: 1, H0651: 1,
S0330: 1, S0152: 1,
H0521: 1, S0037: 1,
S0027: 1, S0206: 1,
L0743: 1, L0740: 1,
L0747: 1, L0756: 1,
H0595: 1 and H0653: 1. | H0707: 17, L0777: 14,
L0803: 7, L0748: 6,
S0002: 5, L0789: 5,
S0126: 5, L0747: 5,
L0750: 5, H0046: 4,
S0412: 4, H0574: 3,
S0010: 3, L0770: 3,
L0666: 3, H0354: 2,
H0510: 2, H0266: 2,
H0644: 2, H0673: 2,
H0494: 2, S0344: 2,
S0426: 2, L0766: 2,
L0776: 2, L0809: 2,
H0659: 2, S0328: 2,
H0539: 2, S0027: 2,
S0028: 2, L0439: 2,
L0779: 2, L0752: 2,
L0731: 2, L0581: 2,
L0601: 2, H0170: 1,
S0342: 1, H0713: 1, | 1q22-q23 | 104770,
107300,
107670,
110700,
131210,
134638,
136132,
145001,
146740,
146740,
146740,
146790,
159440,
159440,
159440,
173610,
176310,
186780,
191030,
191315, |

227400, 227400, 600923, 601412, 601652, 602491	
H0717: 1, S0114: 1, H0583: 1, S0212: 1, S0282: 1, H0661: 1, S0420: 1, S0358: 1, S0444: 1, S0408: 1, H0722: 1, S0046: 1, S0476: 1, H0431: 1, H0592: 1, H0587: 1, S0414: 1, T0114: 1, S0280: 1, H0156: 1, L0021: 1, L0105: 1, H0052: 1, H0050: 1, H0024: 1, H0014: 1, S0051: 1, H0083: 1, S6028: 1, H0292: 1, S0003: 1, H0328: 1, H0428: 1, H0032: 1, H0598: 1, H0090: 1, H0591: 1, H0038: 1, H0634: 1, H0616: 1, S0038: 1, T0041: 1, T0042: 1, H0625: 1, H0561: 1, H0714: 1, S0438: 1, H0529: 1, L0769: 1, L0638: 1, L0667: 1, L0646: 1, L0764: 1, L0765: 1, L0662: 1, L0794: 1, L0649: 1, L0774: 1, L0805: 1, L0379: 1,	

HODKM52	1058305	881	13 - 999	3056	Arg-1 to Val-6.	L0656: 1, L0518: 1, L0783: 1, L0647: 1, L0663: 1, L0664: 1, L0665: 1, H0144: 1, L0438: 1, H0520: 1, H0547: 1, H0593: 1, H0689: 1, S0330: 1, S0004: 1, S0044: 1, H0694: 1, S0406: 1, H0478: 1, S3014: 1, S0032: 1, UNKWN: 1, L0749: 1, L0758: 1, S0031: 1, S0260: 1, L0608: 1 and H0667: 1.		
HCONB89	1058316	882	1 - 1302	3057		H0059: 6, H0370: 5, L0646: 2, L0754: 2, H0664: 1, S0376: 1, H0156: 1, H0615: 1, H0688: 1, H0030: 1, H0494: 1, L0764: 1, L0662: 1, L0664: 1, H0682: 1 and H0666: 1.	8p22-p21.3	148370, 238600, 238600, 238600, 238600, 600143, 601385, 602629

HSABJ44	1058413	883	11 - 925	3058			12p13	
					Gly-1 to Lys-10, Glu-29 to His-36, Gly-43 to Asn-63, Ala-74 to Leu-84, Leu-132 to Asn-142, Pro-189 to Pro-194, Asp-196 to Ser-209, Pro-252 to Gly-268, Thr-271 to Lys-278, Pro-292 to Gln-300.	L0777: 9, L0751: 8, H0046: 5, H0550: 4, L0665: 4, H0521: 4, L0750: 4, H0623: 3, H0435: 3, H0658: 3, S0436: 3, S0212: 2, H0580: 2, H0619: 2, T0039: 2, H0427: 2, H0266: 2, S0438: 2, L0772: 2, L0659: 2, L0666: 2, L0663: 2, S0374: 2, S0152: 2, H0696: 2, H0555: 2, L0749: 2, L0731: 2, L0758: 2, L0596: 2, L0599: 2, S0192: 2, H0685: 1, S0040: 1, H0717: 1, S0116: 1, H0483: 1, H0255: 1, H0661: 1, H0663: 1, S0442: 1, S0358: 1, S0360: 1, S0408: 1, H0728: 1, L0717: 1, H0586: 1, H0618: 1, H0318: 1, H0263: 1, H0544: 1, H0510: 1, H0290: 1, S0368: 1, H0424: 1, H0553: 1, H0606: 1, H0032: 1, H0316: 1, H0634: 1,		103950, 120580, 131440, 139130, 142680, 176260, 190450, 200990, 216950, 600228, 600414, 600618, 602096

|

HBPND88	1058432	884	1 - 1128	3059	Ala-2 to Gly-8, Tyr-12 to Pro-26, Gly-102 to Asn-107, Ala-113 to Asp-122, Arg-130 to Val-135, Glu-142 to Lys-150, Asn-189 to Ala-195, Ala-221 to His-228, Gln-248 to Ser-260, Ser-272 to Gly-283, Leu-321 to Glu-329, Cys-336 to Gly-344,	H0551: 1, H0268: 1, H0494: 1, H0646: 1, S0426: 1, H0529: 1, L0501: 1, L0769: 1, L0646: 1, L0764: 1, L0773: 1, L0662: 1, L0649: 1, L0803: 1, L0375: 1, L0784: 1, L0776: 1, L0807: 1, L0783: 1, L0790: 1, H0693: 1, H0670: 1, H0672: 1, H0539: 1, S0350: 1, H0522: 1, S3014: 1, S0032: 1, L0748: 1, L0754: 1, L0780: 1, L0752: 1, H0595: 1, H0665: 1 and S0242: 1. L0748: 15, L0599: 15, L0731: 9, L0751: 7, L0750: 6, S0360: 5, L0659: 5, L0754: 5, L0755: 5, L0601: 5, H0295: 4, L0655: 4, L0663: 4, L0664: 4, H0670: 4, L0744: 4, L0747: 4, L0757: 4, T0049: 3, S0474: 3, H0124: 3, L0763: 3, L0662: 3, L0768: 3,	10q22-q27	126090, 129010, 142600, 250850, 601386, 601493

| Ala-358 to Gly-367. | L0806: 3, L0509: 3, L0776: 3, L0809: 3, L0666: 3, L0665: 3, S0328: 3, H0445: 3, L0596: 3, S0026: 3, L0600: 3, S0358: 2, S0376: 2, S0444: 2, H0083: 2, S0210: 2, L0761: 2, L0372: 2, L0764: 2, L0774: 2, L0654: 2, L0382: 2, H0435: 2, H0648: 2, L0759: 2, H0444: 2, L0608: 2, H0685: 1, L0785: 1, H0341: 1, S0212: 1, H0255: 1, H0661: 1, H0664: 1, H0662: 1, S0418: 1, S0420: 1, S0442: 1, S0408: 1, S0410: 1, H0393: 1, H0431: 1, H0392: 1, H0331: 1, L0622: 1, T0114: 1, T0109: 1, H0427: 1, L0021: 1, T0082: 1, H0530: 1, H0546: 1, H0545: 1, S0051: 1, H0030: 1, H0031: 1, H0032: 1, H0169: 1, H0674: 1, H0212: 1, |

H6EEO05	1058438	885	67 - 1527	3060			10	---
				Arg-29 to Ser-35, Ser-79 to Gly-91, Pro-105 to Arg-120, Thr-168 to Glu-175, Phe-187 to Ala-200, Arg-272 to Lys-282,	S0364: 1, H0040: 1, H0087: 1, T0067: 1, H0412: 1, H0413: 1, H0102: 1, H0494: 1, S0440: 1, S0422: 1, L0762: 1, L0640: 1, L0770: 1, L0638: 1, L0373: 1, L0646: 1, L0771: 1, L0773: 1, L0363: 1, L0364: 1, L0381: 1, L0388: 1, L0803: 1, L0804: 1, L0775: 1, L0512: 1, L0383: 1, S0374: 1, H0691: 1, H0547: 1, H0519: 1, H0690: 1, H0658: 1, H0696: 1, S0037: 1, S0206: 1, L0745: 1, L0752: 1, L0758: 1, S0434: 1, L0592: 1, L0594: 1, L0595: 1, L0362: 1, L0603: 1, L0097: 1 and S0384: 1.	L0748: 11, L0747: 9, L0749: 7, L0439: 6, L0599: 5, L0779: 4, L0757: 4, L0758: 4, L0662: 3, L0766: 3, L0774: 3, L0659: 3,		---

Arg-325 to Asp-330,	L0751: 3, L0750: 3, S0358: 2, H0431: 2, H0622: 2, L0637: 2, L0375: 2, L0776: 2, L0666: 2, H0648: 2, H0672: 2, S3014: 2, L0741: 2, L0740: 2, L0731: 2, T0002: 1, S0040: 1, S6024: 1, S0116: 1, H0664: 1, S0418: 1, S0360: 1, S0046: 1, L0717: 1, S6016: 1, H0331: 1, H0632: 1, H0559: 1, H0486: 1, H0013: 1, S0010: 1, H0318: 1, S0049: 1, H0434: 1, L0041: 1, L0471: 1, S0362: 1, H0051: 1, S0388: 1, S6028: 1, H0266: 1, H0687: 1, H0615: 1, S0364: 1, H0551: 1, H0272: 1, S0038: 1, H0100: 1, L0351: 1, H0560: 1, S0438: 1, H0509: 1, H0652: 1, S0142: 1, S0344: 1, S0426: 1, L0769: 1, L0638: 1, L0667: 1, L0373: 1,
Arg-332 to Phe-338,	
Arg-358 to Lys-368,	
Cys-433 to Asn-441,	
Leu-456 to Asp-461.	

HFIVR61	1058451	886	157 - 777	3061	Pro-27 to Lys-32, Pro-37 to Ser-44, Glu-46 to Gln-51, Arg-63 to Asn-71, Gln-125 to Ala-135, Gln-150 to Asn-155.	7p21	153880, 601622, 601649

AR096: 10, AR089: 8,
AR039: 7, AR061: 7,
AR053: 6, AR052: 5,
AR033: 5, AR060: 3,
AR104: 3, AR055: 3
S0242: 271, S0196: 77,
H0551: 32, S0003: 13,
H0634: 11, H0635: 10,
H0250: 7, H0069: 7,
L0757: 6, H0486: 5,
H0623: 5, H0386: 4,
S0418: 2, H0411: 2,
S0214: 2, H0628: 2,
L0649: 2, L0803: 2,
L0789: 2, H0265: 1,
H0556: 1, H0140: 1,
S0040: 1, S0298: 1,
H0638: 1, S0376: 1,
H0637: 1, S0046: 1,
H0431: 1, H0461: 1,
L0021: 1, H0318: 1,
L0372: 1, L0764: 1,
L0771: 1, L0648: 1,
L0521: 1, L0363: 1,
L0803: 1, L0650: 1,
L0775: 1, L0788: 1,
L0664: 1, H0660: 1,
L0743: 1, L0753: 1,
L0480: 1, L0595: 1 and
S0460: 1.

| HVVBX28 | 1058458 | 887 | 2 - 493 | 3062 | H0123: 1, H0200: 1, H0109: 1, H0615: 1, H0111: 1, S0015: 1, L0800: 1, L0644: 1, L0766: 1, L0804: 1, L0633: 1, S0126: 1 and L0780: 1. | | |
| | | | | | L0748: 13, L0731: 13, L0749: 7, L0744: 6, L0438: 5, L0740: 5, L0768: 3, L0747: 3, L0758: 3, S0360: 2, L0717: 2, S0022: 2, L0638: 2, H0547: 2, L0743: 2, L0439: 2, L0754: 2, L0604: 2, H0656: 1, H0013: 1, H0427: 1, H0098: 1, S0010: 1, H0014: 1, H0687: 1, H0163: 1, H0561: 1, H0509: 1, H0652: 1, H0538: 1, L0598: 1, L0770: 1, L0769: 1, L0637: 1, L0771: 1, L0363: 1, L0381: 1, L0375: 1, L0806: 1, L0659: 1, L0789: 1, L0665: 1, H0144: 1, H0670: 1, H0672: 1, S0146: 1, | 21q22.1-q22.2 | 147450, 176261, 253270, 601399 |

HVVBI38	1058475	888	258 - 2291	3063	Pro-27 to Lys-35.	H0555: 1, L0750: 1, L0756: 1, L0777: 1, L0753: 1, L0755: 1, L0757: 1, L0759: 1, L0597: 1 and S0276: 1.		
HUKEJ46	1058539	889	242 - 1165	3064		AR089: 2, AR096: 2, AR060: 1, AR053: 1, AR061: 1, AR033: 0, AR055: 0, AR104: 0, AR039: 0 S0358: 5, H0596: 2, H0059: 2, S0354: 1, H0263: 1, L0738: 1, L0639: 1, L0764: 1, L0767: 1, L0768: 1, L0659: 1, S0374: 1, H0660: 1, H0672: 1, S0380: 1 and L0731: 1.		
HDTFT47	1058588	890	2 - 274	3065	Trp-1 to Glu-9, Thr-29 to Val-35, Arg-73 to Thr-79.	L0655: 10, L0664: 9, L0751: 8, H0521: 7, S0360: 5, H0486: 5, L0777: 4, H0657: 3, H0638: 3, H0087: 3, L0763: 3, L0743: 3, L0748: 3, L0599: 3, H0662: 2, H0637: 2, H0581: 2, H0090: 2, L0768: 2, L0651: 2, L0653: 2, L0659: 2,	6p21.3	106300, 108800, 120290, 120290, 120810, 120820, 142857, 142858, 150270, 167250, 170261,

177900,
179450,
201910,
217000,
222100,
233100,
235200,
248611,
256550,
256550,
600202,
600261,
601868,
602280,
602475

L0665: 2, H0659: 2,
H0648: 2, L0755: 2,
H0445: 2, H0650: 1,
H0656: 1, L0808: 1,
H0254: 1, H0255: 1,
H0669: 1, H0663: 1,
H0402: 1, S0358: 1,
H0580: 1, H0586: 1,
T0060: 1, H0250: 1,
H0069: 1, H0318: 1,
H0085: 1, H0051: 1,
H0271: 1, H0252: 1,
H0644: 1, H0182: 1,
H0598: 1, H0591: 1,
H0063: 1, H0272: 1,
H0646: 1, S0426: 1,
L0371: 1, L0638: 1,
L0639: 1, L0761: 1,
L0372: 1, L0643: 1,
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L0773: 1, L0648: 1,
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L0766: 1, L0549: 1,
L0774: 1, L0375: 1,
L0378: 1, L0776: 1,
L0606: 1, L0657: 1,
L0518: 1, L0782: 1,
L0809: 1, L0666: 1,
L0663: 1, H0684: 1,
H0670: 1, S0044: 1,

| HSSFS71 | 1058596 | 891 | 2 - 499 | 3066 | Glu-42 to Leu-48, His-56 to Cys-62, Ala-107 to Pro-119. | H0555: 1, L0741: 1, L0744: 1, L0731: 1, H0595: 1 and H0543: 1. AR055: 18, AR033: 9, AR096: 5, AR104: 5, AR089: 4, AR060: 4, AR052: 2, AR039: 2, AR061: 2, AR053: 1 H0617: 22, H0424: 13, L0439: 12, H0618: 9, H0658: 9, L0751: 9, H0265: 8, L0666: 7, S0126: 7, S0046: 6, S0222: 6, H0031: 6, L0803: 6, L0731: 6, H0009: 5, L0769: 5, L0758: 5, S0420: 4, H0370: 4, L0163: 4, H0553: 4, H0135: 4, L0805: 4, L0657: 4, L0809: 4, L0779: 4, H0483: 3, H0150: 3, H0266: 3, L0663: 3, H0670: 3, L0755: 3, H0717: 2, L0415: 2, H0661: 2, S0444: 2, S0045: 2, H0549: 2, H0486: 2, H0156: 2, H0599: 2, S0049: 2, H0373: 2, T0010: 2, | 14q32.3 |

H0622: 2, L0142: 2, H0181: 2, H0412: 2, H0623: 2, L0351: 2, L0640: 2, L0800: 2, L0648: 2, L0662: 2, L0794: 2, L0789: 2, L0664: 2, L0665: 2, L0438: 2, H0689: 2, H0555: 2, S3014: 2, L0741: 2, L0743: 2, L0754: 2, L0747: 2, H0170: 1, H0685: 1, S0040: 1, H0713: 1, H0716: 1, S6024: 1, H0656: 1, S0212: 1, H0484: 1, S0418: 1, S0358: 1, S0468: 1, S0132: 1, S0476: 1, L0717: 1, L0394: 1, H0550: 1, H0441: 1, H0431: 1, H0592: 1, H0587: 1, H0427: 1, L0021: 1, H0706: 1, H0004: 1, H0253: 1, T0048: 1, H0318: 1, H0581: 1, N0011: 1, H0196: 1, H0041: 1, H0563: 1, H0566: 1, H0050: 1, L0471: 1, H0024: 1, H0014: 1,

HSDJH63	1058612	892	153 - 1358	3067	Thr-17 to Lys-23, Lys-93 to Arg-98.	H0051: 1, S0051: 1, H0284: 1, H0428: 1, H0182: 1, H0606: 1, H0124: 1, H0616: 1, H0087: 1, H0056: 1, H0100: 1, L0370: 1, S0208: 1, L0369: 1, L0520: 1, L0763: 1, L0770: 1, L5575: 1, L5566: 1, L0804: 1, L0775: 1, L0776: 1, L0655: 1, L0383: 1, L0352: 1, H0690: 1, H0660: 1, S0328: 1, S0330: 1, H0696: 1, H0479: 1, H0627: 1, S0037: 1, L0744: 1, L0748: 1, L0777: 1, L0759: 1, H0445: 1, S0436: 1, L0608: 1, L0601: 1, S0242: 1 and H0352: 1.
						AR039: 28, AR053: 20, AR055: 19, AR033: 17, AR052: 16, AR089: 15, AR104: 12, AR061: 12, AR096: 11, AR060: 11
						H0615: 2, L0766: 2, S0114: 1, H0650: 1,

HAHGD24	1058622	893	2 - 1027	3068	Pro-17 to Arg-25, Ala-61 to Trp-72, Gln-96 to Pro-111, Gln-210 to Pro-215.	H0657: 1, L0791: 1, H0689: 1, S0152: 1, S0260: 1 and H0445: 1. L0666: 3, L0657: 2, H0689: 2, H0555: 2, L0751: 2, S0001: 1, S0360: 1, H0675: 1, S0132: 1, H0549: 1, S0222: 1, H0333: 1, T0114: 1, H0599: 1, L0022: 1, H0594: 1, H0688: 1, S0364: 1, H0100: 1, H0561: 1, S0382: 1, L0637: 1, L0761: 1, L0649: 1, L0788: 1, L0789: 1, L0665: 1, H0547: 1, H0690: 1, H0658: 1, H0660: 1, H0672: 1, H0539: 1, H0696: 1, L0743: 1, L0754: 1 and L0780: 1.
HTAEV85	1058723	894	426 - 238	3069		H0052: 20, H0264: 5, H0194: 4, T0010: 4, H0435: 4, H0436: 4, H0543: 4, S0222: 3, L0439: 3, H0069: 2, H0618: 2, H0581: 2, H0012: 2, H0617: 2, H0087: 2, S0038: 2,

					L0438: 2, H0689: 2, L0741: 2, H0423: 2, H0422: 2, H0265: 1, S0001: 1, S0282: 1, H0619: 1, H0250: 1, H0635: 1, H0156: 1, S0049: 1, H0597: 1, H0327: 1, S0388: 1, S0051: 1, H0271: 1, S0036: 1, H0135: 1, H0063: 1, H0116: 1, H0652: 1, L0652: 1, L0517: 1, H0539: 1, H0518: 1, L0758: 1, H0445: 1, L0592: 1 and L0366: 1.
HPMME44	1058928	895	9 - 338	3070	H0265: 1, H0050: 1, H0644: 1, S0150: 1, H0521: 1, H0542: 1 and S0424: 1.
HEEAZ17	1058949	896	2184 - 2426	3071	L0758: 7, L0666: 5, L0749: 4, L0779: 4, H0620: 3, L0540: 3, L0439: 3, L0750: 3, L0731: 3, L0759: 3, S0360: 2, L0763: 2, L0770: 2, L0803: 2, L0775: 2, L0805: 2, L0776: 2, L0665: 2, L0743: 2, L0747: 2,

HSPSG28	1058977	897	474 - 1679	3072				
				Asp-33 to Arg-39, Ala-43 to Leu-48, Glu-256 to Gln-266, Gly-305 to Ile-311, Pro-314 to Ala-320, Gln-388 to Asn-394.	H0657: 6, H0484: 6, S0046: 5, H0486: 5, L0666: 5, L0750: 5, H0543: 5, S0360: 4, S0010: 4, H0617: 4, S0036: 4, H0038: 4, H0056: 4, L0766: 4, H0656: 3, H0292: 3, L0455: 3, H0135: 3, L0769: 3, H0547: 3, H0659: 3, L0439: 3,	L0756: 2, S0040: 1, H0662: 1, S0045: 1, H0549: 1, H0550: 1, H0370: 1, T0060: 1, L0022: 1, H0615: 1, H0135: 1, H0488: 1, H0623: 1, H0059: 1, H0022: 1, L0520: 1, L0640: 1, L0769: 1, L0772: 1, L0662: 1, L0768: 1, L0766: 1, L0804: 1, L0774: 1, L0655: 1, L0809: 1, L4501: 1, L0663: 1, L0664: 1, H0144: 1, H0547: 1, S0330: 1, H0539: 1, H0696: 1, L0744: 1, L0748: 1, L0751: 1 and L0757: 1.	17q23-q25	106180, 114290, 138033, 138700, 139250, 150200, 154275, 162100, 170500, 170500, 170500,

176960,
180860,
249000,
253250,
264470

L0752: 3, L0758: 3,
L0362: 3, S0430: 2,
H0341: 2, S0358: 2,
S0474: 2, H0052: 2,
H0046: 2, L0471: 2,
H0356: 2, H0284: 2,
H0553: 2, H0063: 2,
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L0664: 2, L0565: 2,
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H0689: 2, H0658: 2,
H0521: 2, H0696: 2,
S0044: 2, S0027: 2,
L0747: 2, L0749: 2,
L0591: 2, L0604: 2,
H0423: 2, L0615: 1,
H0685: 1, H0713: 1,
H0483: 1, H0255: 1,
H0663: 1, H0306: 1,
S0420: 1, S0444: 1,
H0580: 1, S0007: 1,
H0393: 1, H0411: 1,
S0278: 1, H0441: 1,
H0392: 1, H0438: 1,
H0586: 1, H0331: 1,
T0109: 1, H0013: 1,
H0427: 1, L0021: 1,
H0575: 1, H0618: 1,

H0374: 1, H0251: 1,
H0309: 1, H0544: 1,
H0150: 1, H0024: 1,
S6028: 1, H0266: 1,
S0022: 1, H0039: 1,
H0031: 1, H0644: 1,
H0628: 1, H0181: 1,
H0124: 1, H0090: 1,
H0591: 1, H0040: 1,
H0616: 1, H0087: 1,
H0551: 1, H0413: 1,
H0623: 1, S0038: 1,
T0042: 1, H0494: 1,
H0561: 1, H0366: 1,
S0294: 1, S0438: 1,
S0440: 1, H0130: 1,
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L0500: 1, L0770: 1,
L0796: 1, L0372: 1,
L0800: 1, L0764: 1,
L0662: 1, L0363: 1,
L0794: 1, L0803: 1,
L0804: 1, L0650: 1,
L0775: 1, L0375: 1,
L0805: 1, L0655: 1,
L0526: 1, L0383: 1,
L0519: 1, L0793: 1,
L0663: 1, L0665: 1,
H0144: 1, S0374: 1,
H0691: 1, L0438: 1,

| HTGFW12 | 1059006 | 898 | 2 - 1450 | 3073 | Gly-1 to Leu-6. | AR060: 23, AR104: 21, AR089: 11, AR061: 8, AR055: 8, AR096: 7, AR055: 6 L0803: 10, L0451: 8, S0250: 6, L0804: 6, L0731: 5, S0212: 4, H0431: 4, H0547: 4, L0439: 4, L0777: 4, S0360: 3, L0776: 3, L0592: 3, H0717: 2, S0116: 2, S0046: 2, H0004: 2, H0046: 2, L0471: 2, H0553: 2, H0090: 2, H0063: 2, L0638: 2, L0662: 2, L0774: 2, L0775: 2, H0683: 1, H0435: 1, H0670: 1, H0672: 1, H0539: 1, H0710: 1, S0152: 1, S0350: 1, H0522: 1, H0576: 1, L0612: 1, L0741: 1, L0748: 1, L0756: 1, S0434: 1, L0596: 1, L0599: 1, S0011: 1, H0668: 1, H0653: 1, H0667: 1, H0136: 1, S0192: 1, S0276: 1 and H0422: 1. |

L0655: 2, L0659: 2, L0517: 2, L0809: 2, S0126: 2, S0152: 2, L0752: 2, H0170: 1, T0049: 1, S0218: 1, H0650: 1, H0661: 1, L0534: 1, L0562: 1, S0376: 1, H0619: 1, H0645: 1, H0411: 1, H0492: 1, H0069: 1, L0021: 1, H0042: 1, H0318: 1, H0581: 1, H0421: 1, H0251: 1, H0057: 1, H0266: 1, H0428: 1, H0039: 1, L0483: 1, H0031: 1, H0644: 1, H0135: 1, H0591: 1, H0040: 1, H0056: 1, S0038: 1, S0014: 1, H0560: 1, S0438: 1, H0538: 1, L0763: 1, L0769: 1, L3905: 1, L0772: 1, L0764: 1, L5574: 1, L0651: 1, L0789: 1, L0663: 1, H0144: 1, H0658: 1, H0672: 1, S0328: 1, S0406: 1, H0555: 1, S3012: 1, S0390: 1, L0748: 1,

| HOFMT75 | 1059050 | 899 | 1 - 465 | 3074 | Ala-18 to Gly-23. | L0750: 1, L0779: 1, L0780: 1, L0755: 1, L0758: 1, L0759: 1, S0260: 1, H0445: 1, S0434: 1, L0593: 1, S0192: 1, S0194: 1, H0423: 1, S0424: 1 and H0506: 1. AR039: 2, AR089: 1, AR060: 1, AR033: 1, AR096: 0, AR061: 0, AR053: 0, AR055: 0, AR104: 0 H0415: 1 and L0751: 1. | 11p15.5 | 125852, 126452, 126452, 141900, 141900, 141900, 141900, 141900, 141900, 142000, 142000, 142200, 142250, 142270, 176730, 176730, 176730, 190020, 191290, 192500, 192500, 194071, |

HARNB17	1059085	900	241 - 501	3075	Arg-1 to Gly-6.	AR089: 7, AR053: 7, AR060: 5, AR039: 5, AR096: 5, AR104: 5, AR033: 5, AR055: 4, AR061: 2 L0439: 7, L0803: 6, L0599: 3, S0360: 2, L0794: 2, H0659: 2, L0747: 2, H0423: 2, H0662: 1, L0717: 1, H0351: 1, H0592: 1, H0085: 1, H0674: 1, H0551: 1, S0422: 1, L0761: 1, L0372: 1, L0767: 1, L0653: 1, L0776: 1, L0659: 1, H0144: 1, H0651: 1, H0436: 1, S0432: 1, L0740: 1, L0754: 1, L0779: 1, L0780: 1, L0731: 1, S0436: 1 and S0026: 1. — 194071, 204500, 600856, 601680, 602631, 602631
HPDRG65	1059102	901	437 - 285	3076		H0658: 2
HAOSG15	1059145	902	1 - 1776	3077		L0754: 23, L0747: 19, 2

H0584: 18, L0731: 17,
S0372: 16, L0766: 14,
L0740: 12, L0749: 12,
L0752: 12, S0358: 11,
L0750: 11, S0360: 9,
H0013: 9, S0003: 9,
H0341: 8, S0420: 8,
H0038: 8, H0144: 8,
L0593: 8, H0040: 7,
L0665: 7, L0755: 7,
L0757: 7, L0591: 7,
L0608: 7, L0438: 6,
L0439: 6, L0759: 6,
S0026: 6, S0424: 6,
H0052: 5, L0748: 5,
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L0758: 5, L0362: 5,
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H0663: 4, H0333: 4,
H0545: 4, H0266: 4,
H0591: 4, L0771: 4,
L0774: 4, L0776: 4,
L0666: 4, H0521: 4,
L0745: 4, L0588: 4,
L0594: 4, H0140: 3,
H0686: 3, S0007: 3,
S0045: 3, H0411: 3,
S0222: 3, H0431: 3,
H0575: 3, L0471: 3,
T0003: 3, S6028: 3,

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H0328: 1, L0483: 1,
H0553: 1, H0628: 1,
H0673: 1, H0598: 1,
H0163: 1, H0090: 1,
H0634: 1, H0264: 1,
H0272: 1, H0412: 1,
H0059: 1, S0038: 1,
L0351: 1, L0564: 1,
T0041: 1, S0016: 1,
H0560: 1, S0464: 1,
S0466: 1, L0065: 1,
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H0633: 1, S0144: 1,
S0142: 1, S0426: 1,
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L0761: 1, L0772: 1,
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L0768: 1, L0794: 1,
L0388: 1, L0803: 1,
L0527: 1, L0656: 1,
L0634: 1, L0518: 1,
L0382: 1, L0809: 1,
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L0565: 1, H0693: 1,
H0520: 1, H0547: 1,
H0593: 1, S0126: 1,
H0659: 1, H0648: 1,
S0328: 1, S0330: 1,
H0539: 1, L0602: 1,

						H0436: 1, H0478: 1, H0627: 1, S0322: 1, S3014: 1, S0028: 1, S0206: 1, S0032: 1, L0742: 1, L0756: 1, L0780: 1, H0343: 1, L0589: 1, L0595: 1, S0011: 1, H0668: 1, S0242: 1, S0194: 1, S0276: 1, H0422: 1 and L0698: 1.
HHEND31	1059180	903	76 - 1827	3078	Asn-1 to Gln-6, Thr-71 to Ala-77, Cys-114 to Ser-126, Pro-147 to Tyr-156, Gly-176 to Gly-182.	AR089: 4, AR039: 3, AR033: 2, AR096: 2, AR104: 2, AR060: 2, AR053: 2, AR061: 1, AR055: 0 / S0040: 1, S0114: 1, H0412: 1, S0386: 1, S0472: 1, L0649: 1, L0803: 1, S0053: 1, L0748: 1 and H0543: 1.
HBMSN62	1059186	904	1000 - 1254	3079	Pro-6 to Lys-19.	L0754: 4, L0766: 3, L0803: 3, H0648: 3, L0758: 3, L0800: 2, L0775: 2, L0666: 2, L0747: 2, L0779: 2, S0116: 1, S0358: 1, H0574: 1, L0021: 1, L0022: 1, S0003: 1, H0615: 1, L0351: 1,

HOVCJ46	1059241	905	2 - 358	3080	Ser-38 to Gly-43, Gln-80 to Ile-93, Leu-104 to Arg-109.	L0769: 6, L0757: 5, L0777: 3, L0731: 3, H0428: 2, L0809: 2, S0404: 2, L0748: 2, L0758: 2, H0575: 1, H0251: 1, H0085: 1, H0644: 1, H0646: 1, L0773: 1, L0662: 1, L0768: 1, L0775: 1, L0782: 1, L0783: 1, L0384: 1, S0126: 1, L0747: 1, L0749: 1 and L0779: 1.	L0667: 1, L0764: 1, L0768: 1, L0806: 1, L0379: 1, L0659: 1, L0647: 1, L0791: 1, L0792: 1, L0663: 1, L0664: 1, L0665: 1, S0330: 1, L0748: 1, L0439: 1, L0777: 1 and L0599: 1.
HWLEP14	1059394	906	32 - 1348	3081	Pro-11 to Arg-21, Gly-34 to Ser-41, Pro-65 to Asn-72, Ser-80 to Gln-85, Phe-124 to Cys-129.	AR089: 2, AR053: 2, AR061: 2, AR039: 2, AR060: 2, AR096: 1, AR033: 1, AR055: 1, AR104: 1, AR052: 0 L0664: 3, S0354: 2, H0617: 2, L0509: 2, H0670: 2, L0601: 2,

HTFNO73	1059415	907	802 - 491	3082	Gly-1 to Asn-7, Lys-12 to Glu-20, Asn-34 to Gly-41, Val-79 to Asn-88.	AR096: 2, AR089: 1, AR055: 1, AR033: 0, AR060: 0, AR061: 0, AR052: 0, AR104: 0, AR053: 0 H0666: 15, H0622: 5, L0809: 3, L0731: 2, H0586: 1, H0032: 1, H0488: 1, L3905: 1, L0766: 1, L0803: 1, L0804: 1, L0656: 1, L0659: 1, H0648: 1, L0779: 1, L0777: 1, L0758: 1, L0759: 1, H0707: 1, S0424: 1 and H0506: 1.	H0170: 1, H0510: 1, H0622: 1, H0604: 1, L0662: 1, H0689: 1 and H0683: 1.
HDABR73	1059532	908	382 - 1191	3083	Ser-1 to Trp-7, Asp-47 to Ile-52, Pro-70 to Ser-80, Cys-89 to Thr-98, Ala-131 to Ser-142, Phe-169 to Cys-176, Gly-183 to Ser-193, Phe-202 to Pro-209, Arg-243 to Ala-249, Ser-256 to Lys-265.	H0494: 21, H0529: 16, L0755: 16, S0358: 15, H0435: 13, L0665: 11, L0747: 11, L0752: 11, H0521: 10, L0649: 9, S0360: 8, L0662: 8, L0659: 8, L0601: 8, S0354: 7, L0754: 7, H0663: 6, S0376: 6, S0444: 6, H0592: 6,	19q13.1 — 164731, 172400, 172400, 180901, 180901, 221770, 248600, 600918, 602716

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L0666: 6, H0295: 5,
H0661: 5, H0497: 5,
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H0580: 4, H0615: 4,
T0023: 4, H0038: 4,
H0647: 4, L0772: 4,
L0768: 4, L0657: 4,
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H0253: 3, H0581: 3,
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H0553: 3, H0617: 3,
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H0641: 3, L0794: 3,
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H0664: 2, H0662: 2,
H0676: 2, S0408: 2,
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H0409: 2, H0587: 2,
H0046: 2, H0009: 2,
H0012: 2, H0083: 2,
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H0030: 2, H0040: 2,

H0059: 2, H0633: 2, H0646: 2, S0422: 2, L0763: 2, L0771: 2, L0382: 2, S0052: 2, H0144: 2, S0310: 2, H0689: 2, H0658: 2, H0670: 2, H0660: 2, S0328: 2, H0522: 2, H0696: 2, H0478: 2, L0744: 2, L0749: 2, L0731: 2, L0759: 2, S0434: 2, H0543: 2, S0424: 2, H0506: 2, S0430: 1, H0650: 1, H0657: 1, S0116: 1, H0484: 1, T0008: 1, S0132: 1, H0550: 1, H0486: 1, T0114: 1, L0021: 1, H0318: 1, H0309: 1, H0263: 1, H0234: 1, H0596: 1, H0597: 1, H0121: 1, H0150: 1, L0471: 1, H0375: 1, H0687: 1, H0428: 1, H0039: 1, H0622: 1, H0033: 1, H0644: 1, H0032: 1, H0673: 1, H0169: 1, S0036: 1, H0616: 1, T0067: 1, H0264: 1,

HOGAJ24	1059626	909	169 - 1698	3084	Gln-37 to Arg-58, Arg-75 to Met-87, Lys-113 to Asn-123,	H0560: 1, H0625: 1, S0466: 1, S0150: 1, S0472: 1, S0144: 1, S0002: 1, L0640: 1, L0770: 1, L0761: 1, L0372: 1, L0764: 1, L0363: 1, L0364: 1, L0774: 1, L0775: 1, L0375: 1, L0806: 1, L0805: 1, L0776: 1, L0655: 1, L0493: 1, L0636: 1, L0383: 1, L0663: 1, H0693: 1, H0520: 1, H0547: 1, S0126: 1, H0690: 1, H0682: 1, H0683: 1, H0684: 1, H0659: 1, H0648: 1, H0672: 1, S0330: 1, S0152: 1, S0350: 1, S0392: 1, S0432: 1, L0741: 1, L0751: 1, L0745: 1, L0757: 1, S0436: 1, L0592: 1, L0599: 1, L0361: 1, L0603: 1, H0423: 1, S0460: 1, S0446: 1 and L0600: 1. H0435: 20, L0751: 20, H0436: 6, L0665: 5, H0052: 4, S0036: 4,

Arg-148 to Tyr-155,	L0438: 4, H0264: 3,
Ser-158 to Gly-165,	H0265: 2, H0261: 2,
Ala-168 to Lys-178,	S0222: 2, T0010: 2,
His-215 to Ile-221,	L0770: 2, L0764: 2,
Ser-236 to Tyr-241,	L0648: 2, H0547: 2,
Ala-278 to Gly-287,	H0682: 2, H0672: 2,
Gly-294 to Asp-299,	L0748: 2, L0756: 2,
Glu-306 to Ser-313,	S0031: 2, H0423: 2,
Ser-374 to Arg-382,	H0556: 1, H0295: 1,
Ala-411 to Pro-416,	S0134: 1, S0282: 1,
Cys-423 to Arg-430,	H0255: 1, H0661: 1,
Thr-452 to Cys-462,	H0663: 1, S0356: 1,
Glu-479 to Glu-499,	S0360: 1, H0619: 1,
Gly-501 to Gly-507.	L0717: 1, S6014: 1,
	H0415: 1, H0643: 1,
	H0486: 1, H0156: 1,
	H0618: 1, S0010: 1,
	H0581: 1, S0049: 1,
	H0457: 1, H0050: 1,
	H0012: 1, H0320: 1,
	H0354: 1, H0271: 1,
	L0140: 1, H0063: 1,
	H0272: 1, H0494: 1,
	H0646: 1, L0761: 1,
	L0644: 1, L0771: 1,
	L0774: 1, L0788: 1,
	H0698: 1, H0593: 1,
	H0658: 1, H0648: 1,
	S0328: 1, S0330: 1,
	H0518: 1, L0744: 1,

HTJMV05	1059692	910	2 - 685	3085	L0439: 1, L0749: 1, L0758: 1, L0759: 1 and S0260: 1. H0083: 17, H0556: 14, H0265: 7, L0794: 6, H0271: 5, H0543: 5, L0766: 4, L0809: 4, H0436: 3, H0635: 2, H0150: 2, S0114: 1, H0650: 1, H0645: 1, S0222: 1, H0438: 1, H0594: 1, H0416: 1, H0615: 1, H0033: 1, H0087: 1, H0488: 1, S0440: 1, S0142: 1, L0764: 1, L0803: 1, L0655: 1, L0657: 1, L0656: 1, L0659: 1, L0783: 1, L0790: 1, L0663: 1, L0665: 1, S0216: 1, H0670: 1, L0758: 1, H0595: 1, H0542: 1, H0423: 1 and H0422: 1.		
HOOIL70	1059710	911	134 - 1996	3086	Pro-19 to Ala-24, Pro-57 to Asp-64, Pro-125 to His-138, Ser-177 to Ala-182, Asn-257 to Ala-266, Glu-275 to Asn-284,	L0749: 6, L0761: 4, H0657: 3, S0142: 3, L0766: 3, L0655: 3, L0777: 3, L0599: 3, H0556: 2, S0358: 2, H0457: 2, L0769: 2,	12p13	103950, 120580, 131440, 139130, 142680, 176260

HUNAE87	1059743	912	146 - 955	3087		11q11	190450, 200990, 216950, 600228, 600414, 600618, 602096
					Arg-288 to Lys-303, Pro-340 to Lys-345, Arg-378 to Cys-387, His-411 to Arg-419, Ile-462 to Ser-468, Gln-553 to Ile-565, Lys-577 to Val-589, His-594 to Lys-621.	L0794: 2, L0499: 2, L0653: 2, L0776: 2, L0659: 2, H0648: 2, H0521: 2, H0555: 2, L0747: 2, L0750: 2, H0445: 2, H0650: 1, H0656: 1, H0255: 1, S0356: 1, S0140: 1, L0717: 1, S0278: 1, S0280: 1, H0274: 1, H0050: 1, H0015: 1, H0083: 1, H0688: 1, H0606: 1, H0124: 1, T0067: 1, S0002: 1, S0426: 1, L0763: 1, L0772: 1, L0771: 1, L0784: 1, L0629: 1, L0382: 1, L0663: 1, L0665: 1, H0689: 1, H0672: 1, H0522: 1, H0436: 1, L0780: 1, L0752: 1, L0731: 1 and H0422: 1.	106100
					Asn-1 to Asp-6, Pro-16 to Gly-22, Tyr-28 to Glu-34, Thr-44 to Val-57, Arg-96 to Pro-106, Leu-118 to His-123, Pro-125 to Ser-146,	L0748: 19, L0754: 15, H0046: 13, L0751: 10, H0013: 8, S0152: 8, H0623: 7, H0644: 6, L0662: 6, L0666: 6, L0438: 6, L0740: 6, L0747: 6, S0358: 5,	

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PCT/US01/18569

Thr-151 to Gln-178,
Glu-199 to Leu-210,
Asp-217 to Tyr-237,
Val-245 to Tyr-251.

S0476: 5, H0575: 5,
H0622: 5, L0659: 5,
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L0769: 3, L0665: 3,
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H0539: 3, S0390: 3,
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L0759: 3, L0591: 3,
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H0583: 1, H0650: 1,
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H0663: 1, H0638: 1,
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H0635: 1, H0156: 1,
H0599: 1, H0118: 1,
T0082: 1, S0010: 1,
S0346: 1, T0048: 1,
H0374: 1, H0194: 1,
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H0687: 1, S0003: 1,
H0688: 1, T0023: 1,
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L0055: 1, H0674: 1,
S0036: 1, H0038: 1,

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HTPHO01	1059764	913	2 - 1081	3088		H0008: 1.	3q13.3-q21	
					Pro-81 to Lys-89,	AR096: 3, AR055: 5,		106165,
					Cys-91 to Leu-100,	AR089: 3, AR061: 3,		117700,
					Asp-103 to Ile-110,	AR053: 2, AR033: 2,		117700,
					Pro-179 to Pro-184,	AR060: 2, AR039: 1,		126451,
					Arg-194 to Met-199,	AR104: 1, AR052: 0		150210,
					Pro-203 to Arg-213,	H0599: 25, L0731: 19,		169600,
					Pro-249 to Ala-262,	L0750: 14, L0754: 13,		180380,
					Ser-274 to Glu-279,	L0766: 8, L0776: 8,		180380,
					Asp-301 to Trp-309,	L0752: 8, L0757: 8,		180380,
					Pro-335 to Ser-343.	L0747: 6, L0744: 5,		190000,
						L0769: 4, L0779: 4,		203500,
						L0777: 4, S0420: 3,		232050,
						L0770: 3, L0755: 3,		276902,
						L0758: 3, L0471: 2,		600882,
						L0771: 2, L0775: 2,		601199,
						L0806: 2, L0659: 2,		601199,
						S0126: 2, H0670: 2,		601199,
						L0743: 2, L0759: 2,		601471,
						L0604: 2, H0624: 1,		601682
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						H0484: 1, H0483: 1,		
						H0661: 1, S0358: 1,		
						S0360: 1, S0046: 1,		
						H0411: 1, H0632: 1,		
						H0427: 1, S0280: 1,		
						H0097: 1, H0004: 1,		
						S0049: 1, H0024: 1,		
						H0028: 1, H0622: 1,		
						L0142: 1, H0708: 1,		

ID				SEQ ID	Amino acid residues	Chromosome	Accession Nos.	Clones
								H0591: 1, L0763: 1, L0772: 1, L0800: 1, L0662: 1, L0764: 1, L0768: 1, L0794: 1, L0803: 1, L0774: 1, L0807: 1, L0809: 1, L0666: 1, L0665: 1, S0148: 1, S0328: 1, S0406: 1, S3014: 1, S0027: 1, S0028: 1, L0599: 1, S0026: 1 and H0667: 1.
HDPWK69	1059784	914	206 - 496	3089				S0001: 1, H0125: 1, H0580: 1, H0581: 1, H0457: 1, H0428: 1, L0627: 1, H0521: 1 and L0749: 1.
HPCOK03	1059849	915	8 - 1267	3090	Asp-19 to Ile-26, Lys-86 to Leu-96, Pro-108 to Leu-119, Ser-121 to Gln-144, Ser-243 to Ala-251, Pro-299 to Thr-305, Asn-349 to Ser-359, Leu-381 to Pro-389, Asn-403 to Ser-420.	20q13.2-q13.3	118504, 118504, 131242, 139320, 139320, 139320, 139320, 602025, 602235	L0748: 19, L0758: 6, L0766: 5, L0794: 5, L0749: 4, H0038: 3, L0771: 3, H0494: 3, H0520: 3, H0288: 2, H0551: 2, L0665: 2, L0438: 2, H0547: 2, H0659: 2, L0591: 2, L0595: 2, H0177: 1, S0418: 1, S0046: 1, H0393: 1, L0717: 1, H0370: 1, T0039: 1, T0114: 1, H0318: 1.

HVVBP14	1059852	916	3 - 935	3091			11p13	
					Pro-26 to Ser-35,	L0754: 10, H0251: 9,		102772,
					Lys-46 to Arg-63,	L0591: 9, S0212: 8,		106210,
					Ile-71 to Asp-76,	S0003: 7, L0771: 7,		106210,
					Lys-105 to Ile-115,	S0192: 7, L0805: 6,		106210,
					Glu-119 to Tyr-125,	H0616: 5, L0776: 5,		106210,
					His-136 to His-141,	H0689: 5, L0747: 5,		107271,
					Leu-148 to Arg-154,	L0777: 5, L0757: 5,		114550,
					Thr-165 to Glu-170,	L0759: 5, H0624: 4,		115500,
					Asp-194 to Gly-201,	S0420: 4, S0360: 4,		136530,
					Glu-216 to Pro-222,	L0471: 4, H0124: 4,		151390,
					Ser-227 to Phe-232,	H0551: 4, H0413: 4,		179615,
					Arg-236 to Glu-248,	L0769: 4, L0517: 4,		179615,
					Glu-271 to Lys-282,	S0126: 4, S3014: 4,		179616,
					Ala-297 to Leu-311.	L0756: 4, L0755: 4,		180385,
						L0731: 4, S0045: 3,		194070,
						T0110: 1, H0553: 1,		
						H0412: 1, H0413: 1,		
						H0623: 1, S0112: 1,		
						T0042: 1, H0529: 1,		
						L0369: 1, L0769: 1,		
						L0646: 1, L0800: 1,		
						L0805: 1, L0655: 1,		
						L0657: 1, L0787: 1,		
						L0789: 1, H0702: 1,		
						H0684: 1, H0648: 1,		
						S0152: 1, H0522: 1,		
						H0626: 1, L0751: 1,		
						L0747: 1, L0777: 1,		
						L0608: 1, H0668: 1 and		
						H0667: 1.		

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H0485: 1, H0599: 1,
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H0596: 1, L0738: 1,
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H0024: 1, H0266: 1,
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L0142: 1, H0628: 1,
L0455: 1, S0015: 1,
H0560: 1, H0561: 1,
S0440: 1, H0641: 1,
S0142: 1, L0598: 1,
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L0374: 1, L0521: 1,
L0794: 1, L0766: 1,
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L0655: 1, L0526: 1,
L0519: 1, L0529: 1,

HOOJC15	1059967	917	1077 - 298	3092	L0747: 4, L0764: 3, H0648: 3, H0624: 2, H0673: 2, L0665: 2, L0748: 2, L0758: 2, H0171: 1, H0556: 1, H0351: 1, L0021: 1, H0318: 1, H0545: 1, H0354: 1, H0616: 1, L0763: 1, L0769: 1, L0667: 1, L0773: 1, L0766: 1, L0804: 1, L0659: 1, L0666: 1,	L0541: 1, L0647: 1, L0788: 1, L0666: 1, L0565: 1, S0148: 1, H0520: 1, H0690: 1, H0659: 1, H0648: 1, H0651: 1, S0328: 1, S0330: 1, S0380: 1, H0710: 1, H0709: 1, H0696: 1, H0704: 1, S0146: 1, H0555: 1, H0478: 1, S0390: 1, S0028: 1, L0740: 1, L0739: 1, L0780: 1, H0444: 1, S0308: 1, H0343: 1, H0595: 1, L0605: 1, L0608: 1, L0595: 1, S0011: 1, H0653: 1 and H0506: 1.

Clone	ID	SEQ cDNA	nt range	SEQ protein	Amino acid features	Clone hits	Chromosome	Accession
						H0547: 1, H0519: 1, H0690: 1, H0658: 1, S0378: 1, S0146: 1, L0740: 1, L0589: 1 and S0106: 1.		
HODFG47	1059969	918	182 - 1213	3093	Gln-1 to Leu-9, Thr-21 to Phe-26, Leu-49 to Arg-62, Thr-114 to Asp-120, Arg-132 to Ser-140, Gln-148 to Trp-155, Pro-192 to Asn-198, Lys-235 to Asp-241, Tyr-256 to Trp-266, Ile-273 to Glu-283, Ser-297 to Lys-304, Val-326 to Val-331.	S0003: 3, L0776: 2, S0040: 1, H0587: 1, S0010: 1, H0328: 1, H0615: 1, H0551: 1, T0042: 1, H0494: 1, L0657: 1, H0519: 1, S0328: 1, H0539: 1, L0758: 1, L0608: 1 and S0194: 1.		
HBIPC05	1060137	919	2 - 265	3094	Pro-19 to Glu-24, Ala-66 to Arg-71, Pro-81 to Tyr-88.	H0617: 2, H0618: 1, S0052: 1 and H0593: 1.		
HOPJJ32	1060193	920	447 - 635	3095	Lys-30 to Phe-36.	L0766: 1, H0684: 1 and H0542: 1.	7p22	600259, 600259
HNOBN20	1060382	921	1380 - 1282	3096		H0615: 2, H0580: 1, H0024: 1, H0428: 1, L0804: 1, H0670: 1, H0651: 1 and L0756: 1.		
HOCPX74	1060391	922	3 - 1514	3097	Gly-18 to Glu-23.	H0650: 1, H0656: 1, H0618: 1, H0290: 1, H0551: 1, H0477: 1, S0450: 1, H0547: 1,		

HTEPP27	1060415	923	12 - 605	3098	Ala-67 to Tyr-72, Glu-75 to Asn-81, Glu-176 to Lys-187.	H0684: 1, H0660: 1, H0555: 1, L0741: 1, L0751: 1 and H0543: 1. L0766: 7, L0803: 5, L0809: 5, L0779: 5, L0756: 4, S0380: 3, L0439: 3, L0759: 3, S0442: 2, H0031: 2, H0591: 2, H0616: 2, L0789: 2, L0438: 2, L0754: 2, L0755: 2, L0731: 2, L0758: 2, H0171: 1, H0657: 1, L2250: 1, H0024: 1, H0169: 1, H0372: 1, L0769: 1, L0637: 1, L0774: 1, L0805: 1, L0776: 1, L0527: 1, L0666: 1, S0374: 1, L0352: 1, H0547: 1, H0670: 1, H0660: 1, H0648: 1, H0539: 1, H0522: 1, L0748: 1, L0752: 1, H0445: 1, H0667: 1 and H0543: 1.		
HLYAJ79	1060495	924	218 - 292	3099	Lys-10 to Ser-19.	S0388: 5, H0594: 4, S0282: 3, H0598: 3, S0344: 3, S0136: 3, H0395: 2, S0280: 2, H0597: 2, S0194: 2,	17p13.3	113721, 247200, 600059, 601545

HCOOQ11	1060656	925	868 - 785	3100		
					H0543: 2, H0510: 1, H0316: 1, S0036: 1, H0538: 1, S0260: 1, H0445: 1, H0595: 1 and S0412: 1.	
					6p21.3	106300, 108800, 120290, 120290, 120810, 120820, 142857, 142858, 150270, 167250, 170261, 177900, 179450, 201910, 217000, 222100, 233100, 235200, 248611, 256550, 256550, 600202, 600261, 601868, 602280,
					L0665: 6, L0740: 6, L0659: 5, L0774: 4, L0775: 4, L0518: 4, L0748: 4, L0754: 4, L0749: 4, S0376: 3, S0002: 3, L0763: 3, L0766: 3, L0776: 3, L0666: 3, L0751: 3, L0747: 3, L0752: 3, L0762: 2, L0640: 2, L0769: 2, L0662: 2, L0768: 2, L0375: 2, L0438: 2, L0750: 2, L0755: 2, L0757: 2, L0603: 2, H0661: 1, L0717: 1, H0370: 1, H0581: 1, H0052: 1, H0545: 1, L0369: 1, L0772: 1, L0642: 1, L0764: 1, L0363: 1, L0767: 1, L0651: 1, L0806: 1, L0809: 1, L0528: 1, L0367: 1, L0791: 1, L0664: 1, H0689: 1, H0670: 1,	

HWMGI51	1060711	926	1 - 618	3101		602475
					Tyr-23 to Arg-29, Gln-57 to Cys-65, Cys-164 to Trp-169.	
					L0805: 9, L0776: 8, H0585: 7, L0731: 7, L0751: 3, L0747: 3, S0282: 2, H0606: 2, H0038: 2, L0769: 2, L0803: 2, L0809: 2, H0690: 2, L0777: 2, L0752: 2, L0758: 2, L0601: 2, H0170: 1, S0358: 1, S0360: 1, S0007: 1, S0476: 1, S0278: 1, H0370: 1, H0559: 1, L0622: 1, L0623: 1, T0114: 1, H0427: 1, L0021: 1, H0204: 1, H0086: 1, H0178: 1, S0051: 1, H0688: 1, H0213: 1, H0163: 1, H0087: 1, H0494: 1, S0440: 1, L0535: 1, L3904: 1, L0764: 1, L0662: 1, L0794: 1, L0774: 1, L0375: 1, L0376: 1, L0657: 1, L0526: 1, L0783: 1, L0383: 1, L0787: 1, H0144: 1,	H0651: 1, H0521: 1, L0744: 1, L0439: 1, L0731: 1 and L0605: 1.

HDPIG33	1060780	927	555 - 863	3102	Cys-38 to Thr-45, Ser-69 to Asp-79, Leu-81 to Gly-89, Pro-97 to Leu-103.	H0660: 1, H0696: 1, S0044: 1, L0740: 1, L0750: 1, L0780: 1, S0436: 1, H0667: 1, H0423: 1 and S0424: 1. / H0208: 1, H0024: 1, H0038: 1, L0776: 1, H0658: 1, H0521: 1 and H0665: 1.
HLYAE20	1060967	928	801 - 1259	3103	Pro-10 to Arg-15, Gly-45 to Trp-57, Gly-77 to Pro-88.	
HKZAR86	1060972	929	1 - 1302	3104	Gln-1 to Arg-14, Leu-21 to Arg-32, Cys-44 to Cys-57.	L0771: 9, H0436: 6, H0494: 4, L0761: 4, L0789: 4, L0743: 4, H0656: 3, H0581: 3, L0764: 3, H0543: 3, H0580: 2, H0427: 2, H0538: 2, L0769: 2, L0806: 2, H0699: 2, H0689: 2, H0521: 2, L0755: 2, H0583: 1, H0341: 1, H0483: 1, H0662: 1, H0550: 1, S0222: 1, H0392: 1, H0486: 1, S0250: 1, H0488: 1, S0426: 1, L0800: 1, L0662: 1, L0768: 1, L0794: 1, L0766: 1, L0803: 1,

HAOTX62	1061036	930	65 - 298	3105	⋮	L0659: 1, S0374: 1, H0547: 1, H0593: 1, S0126: 1, H0435: 1, S0152: 1, L0780: 1, L0757: 1, L0758: 1, H0423: 1 and H0422: 1.
HOCQG58	1061180	931	3034 - 251	3106	Glu-22 to Ser-36, Gly-43 to Asp-74, Leu-83 to Leu-90, Glu-97 to Thr-106, Pro-135 to Arg-140, Lys-188 to Arg-201, Asp-330 to Asp-336, Thr-371 to Ser-381, Asp-413 to Trp-418, Tyr-454 to Lys-461, Gly-474 to Cys-479, Gly-511 to Asp-516, Glu-564 to Thr-573, Phe-640 to Ala-662, Arg-700 to Leu-706, Ala-737 to Tyr-743, Pro-800 to Gln-806, Ala-876 to Thr-881, Arg-921 to Leu-928.	H0617: 8, L0747: 8, L0769: 6, L0665: 5, L0758: 5, L0717: 4, L0794: 4, L0766: 4, L0659: 4, L0748: 4, H0181: 3, H0494: 3, L0638: 3, L0666: 3, H0658: 3, L0750: 3, L0757: 3, H0657: 2, H0255: 2, H0431: 2, H0318: 2, H0328: 2, T0006: 2, H0396: 2, S0426: 2, L0770: 2, L0771: 2, L0375: 2, L0805: 2, L0657: 2, L0384: 2, H0659: 2, L0744: 2, L0756: 2, L0779: 2, L0759: 2, L0596: 2, L0588: 2, L0599: 2, L0593: 2, S0026: 2, H0265: 1, H0685: 1, H0341: 1, H0663: 1, S0418: 1,

S0356: 1, S0358: 1, S0360: 1, S0132: 1, H0411: 1, H0550: 1, S0222: 1, H0441: 1, L0477: 1, L0021: 1, S0346: 1, T0048: 1, H0309: 1, H0009: 1, H0172: 1, L0483: 1, H0031: 1, H0628: 1, H0673: 1, H0674: 1, H0040: 1, H0551: 1, H0412: 1, T0004: 1, H0102: 1, L0351: 1, H0280: 1, H0560: 1, H0633: 1, S0344: 1, L0762: 1, L0501: 1, L0372: 1, L0764: 1, L0768: 1, L0803: 1, L0650: 1, L0806: 1, L0776: 1, L0656: 1, L0783: 1, L0790: 1, L2269: 1, L0565: 1, L0438: 1, H0547: 1, H0689: 1, H0435: 1, H0660: 1, H0672: 1, S0330: 1, S0406: 1, H0576: 1, L0742: 1, L0439: 1, L0740: 1, L0751: 1, L0754: 1, L0749: 1, L0752: 1,

HOFNH33	1061185	932	131 - 925	3107	Asp-78 to Gly-84, Glu-112 to Cys-117, Glu-202 to Val-207, Ser-219 to Ser-234, Pro-237 to Lys-252.	H0415: 2	L0755: 1, L0731: 1, S0031: 1, H0445: 1, L0587: 1, L0592: 1, L0485: 1, L0595: 1, L0601: 1, H0668: 1, S0192: 1 and S0194: 1.
HAJAQ63	1061238	933	966 - 2816	3108	Met-29 to Glu-38, Ser-40 to Ala-48.		H0436: 65, H0521: 11, S0422: 9, L0439: 9, S0360: 8, L0754: 8, L0471: 7, H0581: 6, L0521: 6, H0520: 5, H0519: 5, H0171: 4, S0358: 4, H0580: 4, S0003: 4, H0529: 4, L0520: 4, L0666: 4, L0663: 4, L0664: 4, H0144: 4, H0547: 4, H0539: 4, L0581: 4, L0362: 4, H0624: 3, H0657: 3, S0444: 3, L0717: 3, S0474: 3, S0049: 3, H0052: 3, H0428: 3, H0553: 3, H0090: 3, H0616: 3, H0413: 3, L0774: 3,

L0659: 3, H0658: 3,
S0380: 3, H0518: 3,
L0748: 3, L0779: 3,
L0777: 3, L0752: 3,
H0445: 3, H0543: 3,
H0341: 2, S0001: 2,
H0669: 2, S0418: 2,
S0420: 2, H0393: 2,
S0222: 2, H0586: 2,
H0427: 2, H0318: 2,
H0046: 2, H0457: 2,
H0373: 2, S0051: 2,
H0615: 2, L0455: 2,
H0040: 2, H0560: 2,
S0208: 2, L0598: 2,
L0369: 2, L0776: 2,
L0655: 2, L0517: 2,
L0665: 2, S0374: 2,
H0660: 2, H0672: 2,
S0378: 2, L0602: 2,
S0152: 2, H0555: 2,
L0756: 2, L0758: 2,
L0599: 2, L0608: 2,
L0594: 2, S0026: 2,
S0192: 2, H0542: 2,
H0423: 2, S0424: 2,
H0170: 1, H0686: 1,
S0040: 1, H0717: 1,
H0716: 1, H0583: 1,
H0656: 1, H0671: 1,

H0663: 1, H0638: 1, L0005: 1, S0442: 1, S0354: 1, H0735: 1, S0045: 1, H0619: 1, S6026: 1, S0300: 1, H0175: 1, H0369: 1, H0431: 1, H0612: 1, H0592: 1, H0587: 1, H0331: 1, L0586: 1, H0635: 1, H0156: 1, H0098: 1, H0421: 1, H0309: 1, H0263: 1, T0110: 1, H0597: 1, N0006: 1, H0620: 1, T0010: 1, H0083: 1, H0375: 1, S6028: 1, H0687: 1, S0250: 1, S0214: 1, H0328: 1, H0622: 1, H0124: 1, H0598: 1, H0400: 1, H0163: 1, H0038: 1, H0063: 1, H0551: 1, T0067: 1, H0623: 1, S0038: 1, L0564: 1, L0370: 1, T0042: 1, H0494: 1, H0625: 1, H0561: 1, L0065: 1, S0440: 1, S0150: 1, H0641: 1, L0638: 1, L0667: 1, L0641: 1,

HVVBK70	1061258	934	650 - 1276	3109	Arg-17 to Gly-46, Leu-84 to Pro-133, Glu-137 to Pro-149, Glu-179 to Gly-185, Arg-188 to Tyr-198.	L0731: 9, H0424: 6, L0754: 6, L0758: 5, L0662: 4, L0748: 4, L0747: 4, L0749: 4, L0623: 3, S0050: 3, H0038: 3, H0616: 3, L0659: 3, L0485: 3, H0685: 2, H0255: 2, H0642: 2, H0031: 2, L0657: 2, L0439: 2,
						L0773: 1, L0648: 1, L0662: 1, L0768: 1, L0794: 1, L0766: 1, L0803: 1, L0775: 1, L0378: 1, L0806: 1, L0654: 1, L0526: 1, L0519: 1, L0789: 1, L0792: 1, L0793: 1, H0699: 1, L0565: 1, L0438: 1, H0435: 1, S0406: 1, S0392: 1, H0478: 1, L0742: 1, L0740: 1, L0747: 1, L0750: 1, L0753: 1, L0731: 1, S0434: 1, S0436: 1, L0590: 1, L0592: 1, L0604: 1, L0366: 1, H0668: 1, H0653: 1, H0667: 1, H0422: 1 and S0412: 1.

HVVBA82	1061332	935	3 - 500	3110	Arg-17 to Gln-23, Asn-63 to Gln-71.	L0779: 2, L0599: 2, L0604: 2, H0171: 1, H0657: 1, H0671: 1, S0360: 1, S0408: 1, S0045: 1, H0587: 1, H0333: 1, L0622: 1, H0486: 1, H0013: 1, H0599: 1, H0545: 1, H0594: 1, H0266: 1, H0687: 1, H0688: 1, H0213: 1, H0553: 1, H0135: 1, H0090: 1, H0059: 1, H0494: 1, H0646: 1, H0529: 1, L0763: 1, L0639: 1, L0772: 1, L0764: 1, L0375: 1, L0806: 1, L0509: 1, L0783: 1, L0532: 1, S0428: 1, H0144: 1, H0658: 1, H0672: 1, S0330: 1, S0406: 1, S0206: 1, L0756: 1, L0593: 1, L0361: 1 and H0668: 1. L0748: 10, H0305: 6, H0150: 5, L0777: 5, L0731: 5, L0776: 4, L0809: 4, L0751: 4, S0358: 3, L0157: 3, L0774: 3, L0775: 3,	22q13.1	103050, 103050, 124030, 124030, 138981, 182380,

	188826, 190040, 190040, 190040
L0664: 3, H0672: 3, L0439: 3, L0754: 3, L0750: 3, H0255: 2, S0360: 2, T0039: 2, T0006: 2, S0036: 2, H0087: 2, H0264: 2, H0625: 2, L0769: 2, L0768: 2, L0651: 2, L0663: 2, H0593: 2, L0740: 2, L0755: 2, L0758: 2, L0605: 2, H0484: 1, H0402: 1, S0418: 1, S0420: 1, S0376: 1, S0045: 1, S0046: 1, S0278: 1, H0437: 1, H0392: 1, L0468: 1, H0333: 1, H0643: 1, H0331: 1, H0270: 1, H0101: 1, H0427: 1, H0004: 1, S0010: 1, H0390: 1, H0318: 1, H0327: 1, H0544: 1, H0009: 1, H0024: 1, H0071: 1, H0266: 1, H0213: 1, H0553: 1, H0673: 1, H0135: 1, H0090: 1, H0634: 1, H0616: 1, T0041: 1, H0647: 1, S0344: 1, H0529: 1,	

HWLLG38	1061388	936	99 - 692	3111	Gly-7 to Arg-14, Phe-77 to Gly-83, Ser-98 to Leu-106, Asp-114 to Tyr-120, Met-143 to Lys-156, Met-161 to Gly-167, Ala-178 to Ser-183.	H0622: 2, L0763: 2, L0776: 2, L0759: 2, S0358: 1, H0370: 1, H0486: 1, H0013: 1, H0428: 1, H0035: 1, H0591: 1, L0783: 1, H0144: 1, S0330: 1, L0439: 1 and L0756: 1. L0637: 1, L0800: 1, L0641: 1, L0662: 1, L0766: 1, L0804: 1, L0806: 1, L0805: 1, L0657: 1, L0659: 1, L0540: 1, L0518: 1, S0053: 1, S0374: 1, L0438: 1, H0547: 1, S0126: 1, H0435: 1, S0380: 1, H0518: 1, H0696: 1, S3014: 1, L0742: 1, L0757: 1, H0445: 1, L0361: 1, S0192: 1, H0543: 1 and H0008: 1.
HTPCH84	1061466	937	1 - 978	3112	Pro-2 to Trp-11, Arg-73 to Glu-79, Pro-95 to Thr-103, Pro-106 to Phe-115, Asn-117 to Tyr-124, Thr-142 to Cys-149, Thr-177 to Pro-189,	AR052: 108, AR053: 84, AR096: 60, AR039: 52, AR061: 15, AR055: 14, AR089: 11, AR060: 8, AR033: 7, AR104: 6 H0494: 4, H0593: 3,

HWLHJ68	1061521	938	139 - 471	3113	Cys-17 to Lys-31.	Ser-196 to Cys-208, Gly-219 to Asp-224, Pro-278 to Gly-283.	S0356: 1, S0045: 1, H0485: 1, H0486: 1, H0052: 1, H0545: 1, H0179: 1, H0039: 1 and S0148: 1.	AR052: 8, AR053: 6, AR039: 5, AR096: 5, AR033: 3, AR089: 3, AR104: 3, AR060: 3, AR055: 3, AR061: 2 H0651: 709, L0766: 5, L0754: 5, L0756: 3, L0803: 2, L0779: 2, L0759: 2, S0354: 1, H0643: 1, H0013: 1, H0194: 1, H0545: 1, H0373: 1, H0252: 1, H0615: 1, H0316: 1, H0040: 1, H0641: 1, H0647: 1, S0422: 1, L0598: 1, L0369: 1, L0520: 1, L0762: 1, L0649: 1, L0804: 1, L0527: 1, L0656: 1, H0144: 1, H0702: 1, H0547: 1, H0555: 1, H0436: 1, S0028: 1, L0746: 1, L0750: 1, L0777: 1, L0780: 1, L0752: 1 and L0686: 1.

HLGDA34	1061543	939	2 - 193	3114	Pro-27 to His-34.	S0428: 2, H0610: 1, H0179: 1, H0271: 1 and S0052: 1.
HAICB08	1061629	940	3 - 338	3115	Glu-7 to Gly-12, Ala-71 to Leu-79, Ser-98 to Asp-103.	S0132: 1
HVVAW60	1061694	941	208 - 741	3116	Pro-18 to Asn-25, Ala-44 to Asn-50, Arg-56 to Lys-64, Gly-76 to Gly-85, Lys-92 to Leu-98, Gly-116 to Gly-121, Gln-132 to His-138, Thr-159 to Asp-167.	L0794: 5, L0803: 3, L0518: 3, L0748: 3, H0556: 2, S0360: 2, S0422: 2, L0783: 2, L0809: 2, L0438: 2, L0740: 2, L0754: 2, L0747: 2, L0779: 2, L0777: 2, L0757: 2, L0588: 2, L0594: 2, H0171: 1, T0002: 1, H0657: 1, H0638: 1, S0132: 1, H0369: 1, H0441: 1, H0431: 1, H0497: 1, S0280: 1, S0010: 1, H0318: 1, H0263: 1, H0544: 1, T0003: 1, H0373: 1, H0201: 1, H0032: 1, H0673: 1, H0068: 1, H0038: 1, H0551: 1, S0426: 1, L0640: 1, L0763: 1, L0638: 1, L0662: 1, L0768: 1, L0804: 1, L0774: 1.

HPDVB50	1061708	942	3 - 206	3117	Cys-4 to Asp-16, Lys-36 to Tyr-41, Pro-48 to Asp-68.	L0748: 26, L0754: 20, L0747: 9, L0756: 8, L0777: 8, L0752: 8, L0744: 6, L0740: 6, L0757: 6, H0046: 5, H0553: 5, L0766: 5, L0803: 5, L0775: 5, L0755: 5, L0759: 5, S0418: 4, S0010: 4, L0662: 4, L0794: 4, L0774: 4, L0806: 4, L0438: 4, L0731: 4, L0758: 4, S0212: 3, S0358: 3, H0632: 3, H0635: 3, H0156: 3, H0052: 3, S0003: 3, S0152: 3, H0436: 3, S0037: 3, S0028: 3, L0750: 3, L0615: 2, H0556: 2, S0420: 2, H0619: 2, H0559: 2, H0013: 2, H0575: 2, H0421: 2, H0251: 2, H0545: 2, H0687: 2, L0806: 1, L0805: 1, L0787: 1, H0660: 1, H0672: 1, S0328: 1, S3014: 1, L0749: 1, L0759: 1, H0445: 1, L0581: 1 and H0216: 1.	4q26	147680, 189800, 600919, 601542

| H0628: 2, H0538: 2, |
| L0763: 2, L0770: 2, |
| L0764: 2, L0626: 2, |
| L0804: 2, L0375: 2, |
| L0809: 2, S0126: 2, |
| H0658: 2, H0660: 2, |
| H0521: 2, S0390: 2, |
| S0027: 2, L0745: 2, |
| L0588: 2, L0591: 2, |
| L0603: 2, S0192: 2, |
| S0196: 2, H0170: 1, |
| S0040: 1, S0114: 1, |
| S0134: 1, L0002: 1, |
| H0657: 1, H0341: 1, |
| H0663: 1, H0638: 1, |
| S0354: 1, S0360: 1, |
| S0045: 1, S0046: 1, |
| S0132: 1, H0351: 1, |
| H0550: 1, S0222: 1, |
| H0592: 1, H0497: 1, |
| H0333: 1, H0642: 1, |
| H0486: 1, H0244: 1, |
| H0036: 1, H0004: 1, |
| T0048: 1, H0581: 1, |
| S0049: 1, H0263: 1, |
| H0546: 1, L0471: 1, |
| H0620: 1, H0197: 1, |
| H0199: 1, H0246: 1, |
| H0373: 1, H0083: 1, |
| H0356: 1, S0025: 1, |

H0510: 1, H0266: 1, S0250: 1, H0328: 1, H0622: 1, H0030: 1, H0644: 1, H0032: 1, H0211: 1, H0090: 1, H0372: 1, H0040: 1, T0067: 1, H0412: 1, H0413: 1, H0100: 1, T0041: 1, H0509: 1, S0150: 1, H0641: 1, S0422: 1, L0769: 1, L0646: 1, L0773: 1, L0521: 1, L0767: 1, L0768: 1, L0650: 1, L0376: 1, L0776: 1, L0655: 1, L0661: 1, L0512: 1, L0783: 1, L0791: 1, L0666: 1, H0520: 1, H0593: 1, H0414: 1, H0648: 1, H0672: 1, S0328: 1, H0539: 1, S0378: 1, S0146: 1, H0555: 1, H0626: 1, S3012: 1, S0206: 1, L0439: 1, L0751: 1, L0749: 1, L0786: 1, L0779: 1, H0445: 1, L0599: 1, L0608: 1, S0026: 1, H0665: 1, H0667: 1,

| HAZAY40 | 1061765 | 943 | 3 - 1631 | 3118 | Ser-24 to Lys-55, Glu-67 to Ala-72, Leu-74 to Pro-88, Lys-104 to Tyr-119, Ile-121 to Pro-132, Ser-138 to Glu-148, Asp-158 to Pro-167, Glu-177 to Asp-203, Ser-208 to Gln-218, Pro-221 to Pro-227, Gln-229 to Pro-236, Ser-246 to Asn-254, Pro-268 to Thr-279, Arg-281 to Thr-288, Pro-295 to Asp-301, Val-305 to Val-315, Ala-318 to Asn-344, Glu-351 to Pro-366, Ala-415 to Gly-424, Val-470 to Ser-475, Leu-480 to Gly-485, Pro-511 to Cys-522. | H0543: 1, H0423: 1, S0424: 1, S0452: 1, S0460: 1 and S0384: 1. L0439: 10, H0013: 7, L0438: 4, L0758: 4, L0599: 3, H0171: 2, H0632: 2, S0388: 2, T0010: 2, S0250: 2, H0553: 2, H0644: 2, L0662: 2, L0754: 2, L0747: 2, L0749: 2, L0779: 2, L0777: 2, L0591: 2, S0376: 1, S0045: 1, S0222: 1, H0461: 1, L0623: 1, H0244: 1, H0427: 1, S0280: 1, H0575: 1, H0036: 1, S0346: 1, H0327: 1, H0024: 1, H0051: 1, S0051: 1, H0039: 1, T0006: 1, H0383: 1, H0316: 1, S0036: 1, H0038: 1, H0268: 1, L0351: 1, H0280: 1, H0494: 1, L0769: 1, L0637: 1, L0646: 1, L0768: 1, L0649: 1, L0650: 1, L0805: 1, L0776: 1, L0659: 1, L0783: 1, |

| HACMZ51 | 1061766 | 944 | 61 - 1617 | 3119 | Ala-38 to Thr-45, Ser-70 to Asp-77, Ser-85 to Asp-90, Asp-139 to Gly-145, Ile-207 to Asp-213, Arg-229 to Met-234, Gly-259 to Ser-264, Ile-281 to Ser-288, Asp-337 to Leu-343, Gln-369 to Ile-376, Gly-429 to Ser-440, Gln-448 to Val-456, Gln-461 to Thr-474. | L0777: 21, L0439: 18, H0052: 15, S0010: 12, H0013: 11, L0770: 11, L0749: 11, H0144: 10, L0748: 10, L0754: 10, L0747: 10, H0521: 9, S0222: 8, S0051: 8, S0036: 8, L0659: 8, L0740: 8, L0752: 8, L0758: 8, L0595: 8, S0278: 7, S0440: 7, L0744: 7, L0592: 7, H0457: 6, H0623: 6, L0646: 6, H0547: 6, S0152: 6, L0601: 6, H0575: 5, S0049: 5, H0046: 5, L0471: 5, H0551: 5, L0664: 5, L0665: 5, H0520: 5, S3014: 5, S0260: 5, L0599: 5, H0556: 4, S6024: 4, S0418: 4, S0354: 4, S0360: 4, S0388: 4, H0615: 4, |
| | | | | | | H0144: 1, H0690: 1, H0659: 1, H0660: 1, H0648: 1, S0330: 1, H0539: 1, S0037: 1, L0731: 1, L0608: 1, L0595: 1 and L0366: 1. |

S0038: 4, H0100: 4,
S0344: 4, S0002: 4,
L0764: 4, L0774: 4,
S0027: 4, L0745: 4,
L0759: 4, L0596: 4,
S0196: 4, H0543: 4,
H0717: 3, H0638: 3,
S0420: 3, S0442: 3,
S0358: 3, H0619: 3,
S6026: 3, H0586: 3,
H0486: 3, H0156: 3,
H0599: 3, S0346: 3,
L0157: 3, H0428: 3,
H0622: 3, T0006: 3,
H0031: 3, H0038: 3,
H0529: 3, L0771: 3,
L0766: 3, L0789: 3,
L0438: 3, S0028: 3,
L0750: 3, L0753: 3,
L0731: 3, L0757: 3,
L0366: 3, H0542: 3,
L0600: 3, H0624: 2,
H0171: 2, S0116: 2,
H0483: 2, H0305: 2,
L0005: 2, S0376: 2,
S0408: 2, S0007: 2,
S0046: 2, S0132: 2,
S0300: 2, H0351: 2,
H0261: 2, H0370: 2,
H0438: 2, S0280: 2,

H0318: 2, S0474: 2,
H0434: 2, H0596: 2,
H0546: 2, H0009: 2,
H0620: 2, H0051: 2,
H0083: 2, S6028: 2,
H0266: 2, H0286: 2,
H0628: 2, H0090: 2,
H0412: 2, H0494: 2,
H0509: 2, H0130: 2,
S0142: 2, S0426: 2,
L0769: 2, L0638: 2,
L0773: 2, L0662: 2,
L0768: 2, L0657: 2,
L0783: 2, L0809: 2,
L0663: 2, S0052: 2,
H0519: 2, S0328: 2,
H0539: 2, H0696: 2,
H0214: 2, S0404: 2,
S0406: 2, H0631: 2,
S0037: 2, L0751: 2,
L0779: 2, H0445: 2,
L0588: 2, L0361: 2,
S0194: 2, L0411: 1,
H0170: 1, H0265: 1,
H0686: 1, H0685: 1,
H0713: 1, H0294: 1,
H0650: 1, H0341: 1,
S0212: 1, S0282: 1,
H0255: 1, H0663: 1,
H0402: 1, S0356: 1,

S0444: 1, H0637: 1,
H0580: 1, H0645: 1,
H0393: 1, H0437: 1,
H0549: 1, H0613: 1,
H0331: 1, H0574: 1,
H0632: 1, S0414: 1,
L0622: 1, H0250: 1,
H0069: 1, H0635: 1,
H0427: 1, H0097: 1,
T0082: 1, H0390: 1,
H0581: 1, H0421: 1,
H0310: 1, H0597: 1,
H0231: 1, H0327: 1,
H0544: 1, H0178: 1,
L0158: 1, H0569: 1,
H0123: 1, H0050: 1,
H0024: 1, H0373: 1,
H0201: 1, T0010: 1,
H0179: 1, H0271: 1,
H0288: 1, S0214: 1,
H0688: 1, H0039: 1,
L0483: 1, H0553: 1,
H0165: 1, H0598: 1,
H0591: 1, H0634: 1,
H0264: 1, H0056: 1,
L0351: 1, T0041: 1,
T0042: 1, H0560: 1,
H0625: 1, S0464: 1,
S0438: 1, S0150: 1,
H0633: 1, H0646: 1,

S0144: 1, H0538: 1,
S0210: 1, L0369: 1,
L0763: 1, L0371: 1,
L0796: 1, L0761: 1,
L0667: 1, L0373: 1,
L0765: 1, L0649: 1,
L5569: 1, L0386: 1,
L0803: 1, L0775: 1,
L0378: 1, L0806: 1,
L0805: 1, L0776: 1,
L0655: 1, L0518: 1,
L0383: 1, L0382: 1,
L0792: 1, L0532: 1,
H0725: 1, H0691: 1,
T0068: 1, S0126: 1,
H0689: 1, H0690: 1,
H0435: 1, H0658: 1,
H0670: 1, H0660: 1,
S0330: 1, S0380: 1,
H0710: 1, S0454: 1,
H0522: 1, H0704: 1,
H0555: 1, H0478: 1,
H0627: 1, H0727: 1,
S3012: 1, S0206: 1,
S0032: 1, L0741: 1,
L0746: 1, L0756: 1,
L0780: 1, L0755: 1,
S0031: 1, S0436: 1,
L0589: 1, L0485: 1,
L0608: 1, L0594: 1,

| HUXAL63 | 1061790 | 945 | 2 - 1300 | 3120 | Thr-6 to Leu-24, Gly-87 to Ala-92, Ser-103 to Ser-118, Asp-127 to Asn-135, Gln-141 to Phe-147, Thr-149 to Arg-159, Phe-330 to Ala-338, Pro-390 to Thr-398. | S0011: 1, S0026: 1, S0192: 1, H0423: 1 and H0352: 1. L0794: 6, L0766: 6, L0758: 6, L0665: 4, L0439: 4, L0779: 4, H0590: 3, L0598: 3, L0763: 3, L0666: 3, H0648: 3, L0754: 3, L0362: 3, H0506: 3, H0657: 2, H0661: 2, S0438: 2, L0646: 2, L0803: 2, L0375: 2, L0806: 2, L0809: 2, L0438: 2, L0744: 2, L0740: 2, L0747: 2, L0731: 2, S0434: 2, L0589: 2, H0713: 1, S0114: 1, H0583: 1, H0255: 1, H0669: 1, H0663: 1, S0222: 1, H0497: 1, L0021: 1, L0022: 1, H0036: 1, H0052: 1, L0163: 1, H0239: 1, H0179: 1, H0615: 1, H0553: 1, H0163: 1, H0038: 1, H0100: 1, S0440: 1, S0422: 1, S0426: 1, UNKWN: 1, L5575: 1, |

| HLCLX57 | 1061886 | 946 | 3 - 953 | 3121 | Lys-20 to Glu-27. | L0644: 1, L0764: 1, L0662: 1, L0651: 1, L0653: 1, L0655: 1, L0661: 1, L0657: 1, L0526: 1, L0783: 1, L0793: 1, L0664: 1, S0374: 1, H0682: 1, H0658: 1, S0328: 1, H0539: 1, S0454: 1, S0406: 1, S0028: 1, L0750: 1, L0752: 1, L0759: 1, S0260: 1, H0445: 1, L0596: 1 and L0597: 1. / S0126: 9, H0622: 6, L0777: 5, S0250: 4, H0551: 4, S0045: 3, L0659: 3, L0809: 3, L0565: 3, L0757: 3, S0196: 3, S0212: 2, S0046: 2, H0619: 2, H0575: 2, H0591: 2, L0375: 2, L0805: 2, L0665: 2, L0743: 2, T0049: 1, S0420: 1, S0356: 1, S0360: 1, H0437: 1, H0586: 1, H0486: 1, H0013: 1, H0156: 1, L0021: 1, H0042: 1, H0618: 1, | 14q24 | 107970, 115650, 182600, 602091 |

["

L0595: 6, H0667: 6, S0414: 5, H0575: 5, H0581: 5, L0483: 5, H0641: 5, L0764: 5, L0438: 5, H0519: 5, L0751: 5, L0747: 5, L0731: 5, L0757: 5, H0661: 4, H0662: 4, S0354: 4, S0376: 4, S0046: 4, S0222: 4, H0052: 4, H0266: 4, S0214: 4, H0031: 4, H0040: 4, L0662: 4, H0520: 4, H0539: 4, H0522: 4, S0206: 4, L0748: 4, L0754: 4, H0542: 4, S0134: 3, H0657: 3, S0358: 3, H0580: 3, H0586: 3, H0009: 3, H0050: 3, L0471: 3, H0201: 3, H0039: 3, H0644: 3, H0032: 3, H0598: 3, H0616: 3, S0142: 3, S0344: 3, L0773: 3, L0794: 3, L0649: 3, L0659: 3, L0663: 3, H0435: 3, H0658: 3, H0660: 3, S0330: 3, S0270: 3, L0752: 3,

L0591: 3, L0592: 3,
L0593: 3, H0423: 3,
H0624: 2, S0218: 2,
H0341: 2, H0663: 2,
S0356: 2, S0278: 2,
H0587: 2, H0497: 2,
H0574: 2, H0485: 2,
H0486: 2, T0115: 2,
H0046: 2, H0014: 2,
S6028: 2, S0003: 2,
H0615: 2, H0622: 2,
T0023: 2, H0316: 2,
S0036: 2, H0135: 2,
H0264: 2, H0623: 2,
S0150: 2, H0529: 2,
L0775: 2, L0806: 2,
L0783: 2, L0809: 2,
L0665: 2, L0602: 2,
H0518: 2, L0750: 2,
H0445: 2, L0599: 2,
L0608: 2, L0594: 2,
L0366: 2, S0011: 2,
H0506: 2, H0170: 1,
S0258: 1, T0002: 1,
S0040: 1, H0583: 1,
H0656: 1, S0116: 1,
S0212: 1, S0035: 1,
S0400: 1, H0346: 1,
H0669: 1, H0671: 1,
S0418: 1, S0420: 1,

S0360: 1, H0675: 1, S0045: 1, H0393: 1, H0437: 1, S6014: 1, H0370: 1, H0403: 1, H0438: 1, L0586: 1, T0109: 1, H0635: 1, H0427: 1, H0156: 1, H0042: 1, H0590: 1, H0004: 1, H0318: 1, S0049: 1, T0110: 1, H0544: 1, H0457: 1, N0006: 1, H0562: 1, H0024: 1, H0373: 1, L0163: 1, S0388: 1, T0010: 1, H0083: 1, H0630: 1, H0179: 1, H0188: 1, H0288: 1, S0250: 1, H0252: 1, T0006: 1, H0628: 1, L0455: 1, L0456: 1, H0634: 1, H0268: 1, H0413: 1, T0004: 1, H0100: 1, L0351: 1, L0435: 1, L0370: 1, T0041: 1, H0560: 1, H0561: 1, S0382: 1, S0450: 1, H0509: 1, H0207: 1, H0633: 1, H0647: 1, S0144: 1, S0208: 1, S0422: 1,

| HACMR36 | 1062057 | 948 | 1 - 1515 | 3123 | Gly-20 to Gly-25, Leu-47 to Pro-56, Gly-63 to Glu-68, Glu-87 to Ala-99. | L0761: 1, L0667: 1, L0772: 1, L0372: 1, L0646: 1, L0521: 1, L0768: 1, L0774: 1, L0375: 1, L0651: 1, L0805: 1, L0776: 1, L0655: 1, L0657: 1, L0526: 1, L0664: 1, S0428: 1, S0374: 1, L0352: 1, H0689: 1, H0690: 1, H0682: 1, H0683: 1, H0414: 1, H0659: 1, H0670: 1, H0672: 1, H0651: 1, S0328: 1, S0378: 1, S0380: 1, H0134: 1, H0555: 1, H0436: 1, H0478: 1, H0627: 1, S0037: 1, S3014: 1, S0027: 1, S0028: 1, L0759: 1, L0684: 1, H0668: 1, H0665: 1, H0136: 1 and H0677: 1. L0717: 3, H0618: 2, H0617: 2, L5566: 2, L0649: 2, L0666: 2, H0685: 1, H0716: 1, H0306: 1, S0360: 1, S0045: 1, S0222: 1, H0370: 1, H0392: 1, | |

HAOSM08	1062079	949	80 - 2338	3124		5
					L0794: 13, L0803: 9, H0013: 7, L0438: 6, L0758: 6, T0010: 5, L0439: 5, L0591: 5, H0413: 4, H0144: 4, L0742: 4, L0751: 4, L0731: 4, S0007: 3, H0038: 3, H0494: 3, L0755: 3, L0601: 3, H0170: 2, H0686: 2, S0418: 2, S0408: 2, S0046: 2, H0619: 2, H0050: 2, S6028: 2, H0268: 2, L0598: 2, L0770: 2, L0800: 2, L0764: 2, L0659: 2, L0666: 2, L0663: 2, L0665: 2, H0547: 2, H0658: 2, S0152: 2, L0741: 2, L0754: 2, L0747: 2, L0750: 2,	H0427: 1, H0622: 1, L0640: 1, L0763: 1, L0637: 1, L5565: 1, L0373: 1, L0641: 1, L0648: 1, L0364: 1, L0766: 1, L0663: 1, L0665: 1, H0690: 1, L0748: 1, L0779: 1, L0599: 1 and L0595: 1.

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L0779: 2, L0752: 2,
L0759: 2, L0588: 2,
L0592: 2, L0411: 1,
H0624: 1, S0001: 1,
S0420: 1, H0329: 1,
S0045: 1, S0132: 1,
S6026: 1, H0437: 1,
H0592: 1, L0021: 1,
H0575: 1, S0010: 1,
H0318: 1, H0251: 1,
T0115: 1, H0046: 1,
H0569: 1, H0014: 1,
H0373: 1, H0266: 1,
S0250: 1, H0328: 1,
H0622: 1, H0032: 1,
H0616: 1, H0412: 1,
H0056: 1, H0623: 1,
S0386: 1, H0100: 1,
L0351: 1, L0564: 1,
H0509: 1, L4747: 1,
L0644: 1, L0804: 1,
L0775: 1, L0375: 1,
L0776: 1, L0809: 1,
L0790: 1, L0532: 1,
H0520: 1, H0670: 1,
S0146: 1, H0555: 1,
S0028: 1, L0748: 1,
L0740: 1, L0777: 1,
L0753: 1, L0757: 1,
H0445: 1, L0605: 1,

HTEFM89	1062084	950	380 - 1234	3125	Ala-18 to His-32, Tyr-51 to Phe-56, Asn-100 to Arg-106, His-140 to Gly-153, Ser-167 to Gly-193, Ser-205 to Asp-214, Trp-237 to Thr-244, Asp-268 to Gln-274.	S0242: 1 and S0276: 1. H0038: 4, L0758: 2, S0040: 1, H0125: 1, S0420: 1, H0622: 1, H0634: 1, H0616: 1, H0623: 1, T0042: 1 and H0560: 1.
HCHAK72	1062123	951	2 - 1183	3126	Pro-18 to Thr-25, Ser-36 to Tyr-45, Met-68 to Tyr-77, Gly-148 to Ser-154, Ser-234 to Gly-242, Asn-267 to Asp-274, Cys-337 to Gly-342, Met-388 to Thr-394.	AR039: 25, AR089: 23, AR096: 18, AR053: 16, AR060: 15, AR033: 14, AR055: 10, AR104: 9, AR061: 7 L0766: 3, S0356: 2, S0222: 2, H0266: 2, H0616: 2, S0422: 2, L0794: 2, L0655: 2, L0664: 2, H0672: 2, L0777: 2, L0731: 2, H0422: 2, H0171: 1, H0657: 1, S0116: 1, H0341: 1, H0483: 1, H0449: 1, S0376: 1, S0045: 1, H0587: 1, H0497: 1, H0421: 1, H0327: 1, H0057: 1, H0014: 1, H0375: 1, S6028: 1, S0003: 1, S0214: 1, H0328: 1,

HPAME12	1062139	952	2 - 1654	3127		10
				Phe-16 to Arg-24, Pro-31 to Thr-41, Leu-50 to Gly-63, Leu-132 to Asp-138, Gln-152 to Val-160, Gln-178 to Lys-188, Leu-196 to Glu-205, Pro-207 to Lys-213, Gly-221 to Ala-228, Glu-239 to Phe-245, Asp-257 to Ser-264, Ala-301 to Tyr-306, Phe-327 to Trp-334, Lys-371 to Lys-384, Glu-419 to Ala-426, Ile-447 to Phe-454, Val-475 to Thr-483,	H0422: 4, S0222: 3, L0775: 3, L0754: 3, H0171: 2, H0013: 2, H0635: 2, H0024: 2, L0493: 2, L0518: 2, L0438: 2, H0522: 2, L0740: 2, L0756: 2, L0755: 2, L0731: 2, L0757: 2, S0260: 2, H0170: 1, S0402: 1, S0376: 1, H0580: 1, H0574: 1, H0486: 1, L0021: 1, H0098: 1, H0036: 1, H0545: 1, S0048: 1, H0622: 1, H0031: 1, H0644: 1, H0032: 1, H0598: 1,	H0644: 1, H0032: 1, H0090: 1, H0038: 1, H0087: 1, H0264: 1, H0268: 1, H0529: 1, L0762: 1, L0638: 1, L0771: 1, L0521: 1, L0803: 1, L0657: 1, L0659: 1, L0783: 1, L0666: 1, L0665: 1, H0658: 1, H0521: 1, S0176: 1, S0406: 1, L0439: 1, L0779: 1 and L0758: 1.

| HPCQK37 | 1062260 | 953 | 3 - 830 | 3128 | Ser-93 to Pro-99, Asn-214 to Gly-220, Thr-255 to Ala-268. | S0136: 47, L0769: 10, L0439: 7, L0750: 7, H0620: 5, L0776: 5, H0519: 5, L0740: 5, L0752: 5, H0341: 4, H0545: 4, S0440: 4, L0805: 4, L0509: 4, L0809: 4, L0666: 4, L0748: 4, S0436: 4, H0624: 3, H0265: 3, H0556: 3, S0418: 3, H0393: 3, L0717: 3, H0266: 3, S0422: 3, L0764: 3, L0659: 3, |

Leu-516 to Gln-522, Glu-528 to Asn-537.

S0036: 1, H0163: 1, H0591: 1, H0494: 1, H0641: 1, L0762: 1, L0646: 1, L0662: 1, L0794: 1, L0804: 1, L0783: 1, L0809: 1, L0666: 1, H0144: 1, S0374: 1, H0547: 1, H0689: 1, H0682: 1, S0328: 1, H0518: 1, S0152: 1, S3014: 1, S0032: 1, L0744: 1, L0747: 1, L0750: 1, L0777: 1, H0595: 1, L0599: 1, H0667: 1 and H0423: 1.

H0696: 3, L0755: 3,
L0731: 3, S0434: 3,
S0026: 3, S0356: 2,
S0358: 2, S0360: 2,
S0045: 2, H0587: 2,
H0574: 2, T0060: 2,
S0010: 2, H0046: 2,
H0510: 2, H0032: 2,
H0673: 2, H0169: 2,
H0674: 2, H0135: 2,
H0038: 2, H0413: 2,
H0646: 2, L0646: 2,
L0766: 2, L0803: 2,
L5622: 2, L0665: 2,
S0374: 2, H0659: 2,
H0648: 2, S0328: 2,
S0378: 2, S0380: 2,
S3014: 2, L0756: 2,
L0777: 2, L0758: 2,
L0588: 2, L0589: 2,
L0592: 2, L0594: 2,
L0603: 2, H0543: 2,
H0171: 1, S0040: 1,
H0717: 1, H0295: 1,
T0049: 1, L0002: 1,
H0657: 1, H0346: 1,
H0255: 1, H0664: 1,
H0305: 1, H0589: 1,
S0420: 1, S0442: 1,
S0376: 1, S0444: 1,

H0675: 1, S0410: 1,
H0730: 1, S0046: 1,
S0132: 1, H0592: 1,
H0586: 1, H0333: 1,
H0642: 1, H0331: 1,
H0632: 1, H0486: 1,
H0013: 1, H0427: 1,
L0021: 1, H0575: 1,
H0590: 1, S0182: 1,
H0085: 1, H0596: 1,
T0110: 1, H0546: 1,
L0157: 1, H0572: 1,
H0571: 1, H0024: 1,
L0695: 1, H0373: 1,
L0163: 1, S6028: 1,
S0003: 1, H0252: 1,
H0328: 1, H0622: 1,
T0006: 1, H0031: 1,
H0553: 1, H0628: 1,
H0166: 1, S0364: 1,
L0455: 1, H0124: 1,
H0598: 1, H0400: 1,
H0163: 1, H0090: 1,
H0616: 1, H0551: 1,
T0067: 1, H0433: 1,
H0100: 1, T0041: 1,
H0625: 1, H0561: 1,
S0448: 1, S0450: 1,
S0438: 1, H0509: 1,
H0132: 1, H0647: 1,

HCE4F10	1062309	954	977 - 3	3129		
				Glu-27 to Thr-34, His-253 to Tyr-281, Glu-290 to Asp-295.	H0649: 1, S0208: 1, H0529: 1, L0770: 1, L0637: 1, L0772: 1, L0372: 1, L0800: 1, L0374: 1, L0662: 1, L0649: 1, L0388: 1, L0774: 1, L0775: 1, L0375: 1, L0653: 1, L0628: 1, L0513: 1, L0526: 1, L0518: 1, L0382: 1, L0663: 1, L0664: 1, L0565: 1, L0438: 1, H0547: 1, H0690: 1, H0435: 1, H0660: 1, H0666: 1, S0330: 1, S0044: 1, S0406: 1, H0436: 1, H0479: 1, S0037: 1, S0206: 1, L0747: 1, L0780: 1, L0753: 1, L0757: 1, L0759: 1, H0445: 1, H0707: 1, L0485: 1, L0608: 1, L0595: 1, H0667: 1, L0097: 1, S0196: 1 and S0446: 1.	H0052: 3, H0050: 2, H0650: 1, H0657: 1, S0212: 1, S0358: 1, S0045: 1, H0586: 1,

						H0575: 1, H0046: 1, H0292: 1, H0328: 1, H0622: 1, H0135: 1, L0766: 1, S0374: 1, H0648: 1, H0539: 1, H0521: 1, L0750: 1, L0591: 1, H0542: 1 and S0460: 1.
HBCBE63	1062328	955	32 - 790	3130	Ser-4 to Gln-21, His-33 to Pro-38, Arg-80 to Ser-87, Lys-133 to Tyr-139, Gln-162 to Phe-168, Ala-173 to Lys-179, Glu-198 to Glu-204, Ala-212 to Asn-218, Ser-238 to Arg-245.	S0358: 1, H0370: 1, H0270: 1, H0122: 1, H0253: 1, H0545: 1, H0046: 1, H0015: 1, L0669: 1, H0617: 1, H0032: 1, H0038: 1, H0616: 1, H0658: 1, S0436: 1 and L0596: 1.
HSSJO19	1062346	956	409 - 248	3131	Arg-1 to Pro-12, Leu-29 to Gln-41.	L0439: 5, L0764: 2, H0660: 2, L0749: 2, S0031: 2, L0591: 2, H0486: 1, L0471: 1, H0424: 1, H0135: 1, L0763: 1, L0769: 1, L0639: 1, L0771: 1, L0375: 1, L0784: 1, L0776: 1, H0478: 1 and L0747: 1.
HE8NQ23	1062369	957	574 - 1419	3132		AR060: 2, AR061: 2, AR055: 1, AR096: 1, AR033: 1, AR039: 1,

HTELJ95	1062431	958	95 - 949	3133		
				Ala-24 to Glu-29, Glu-91 to Arg-110, Arg-115 to Trp-124, Ser-126 to Asp-140, Tyr-156 to Phe-161, Lys-209 to Asp-215, Gly-224 to Thr-230, Pro-254 to Phe-261, Thr-266 to Asp-285.	AR089: 0, AR104: 0, AR053: 0 L0665: 12, L0666: 5, L0794: 4, L0664: 4, L0759: 4, H0574: 3, L0657: 3, H0031: 2, H0553: 2, H0624: 1, H0632: 1, H0013: 1, H0328: 1, L0598: 1, L0369: 1, L0645: 1, L0662: 1, H0144: 1, H0660: 1 and S0406: 1.	L0766: 5, L0748: 5, L0362: 4, L0755: 3, H0170: 2, H0265: 2, H0328: 2, H0494: 2, L0776: 2, L0747: 2, L0750: 2, L0731: 2, L0758: 2, H0650: 1, H0657: 1, S0001: 1, H0638: 1, S0418: 1, H0329: 1, S0007: 1, L0717: 1, T0039: 1, L0021: 1, H0097: 1, H0544: 1, L0163: 1, S0388: 1, S0051: 1, H0266: 1, S0003: 1, S0214: 1, H0615: 1, H0616: 1, H0269: 1, H0623: 1, T0041: 1,

HTPCP50	1062435	959	3 - 2138	3134		
				Pro-9 to Lys-24, Ser-39 to Lys-46, Asp-80 to Asn-86, Gln-89 to Ser-103, Phe-112 to Thr-123, Gln-260 to Ser-272, Asp-283 to His-289, Pro-341 to Glu-351, Met-362 to Thr-368, Arg-382 to Arg-389, Asn-396 to Gly-410, Tyr-415 to His-427, Ile-477 to Lys-486, Tyr-575 to Thr-580, Lys-692 to Leu-700.	AR096: 4, AR055: 4, AR053: 3, AR089: 2, AR033: 2, AR052: 2, AR061: 2, AR060: 2, AR104: 2, AR039: 1 L0747: 5, H0623: 4, S0212: 3, S0045: 3, H0586: 3, H0427: 3, S0028: 3, L0439: 3, L0749: 3, L0599: 3, L0415: 2, S0046: 2, H0553: 2, H0412: 2, L0662: 2, L0659: 2, S0146: 2, H0713: 1, H0716: 1, T0049: 1, H0662: 1, S0356: 1, H0722: 1, H0486: 1, S0280: 1, H0575: 1, H0024: 1, H0375: 1, H0266: 1, H0428: 1,	T0042: 1, H0538: 1, S0422: 1, L0763: 1, L0794: 1, L0803: 1, L0375: 1, H0144: 1, H0659: 1, S0330: 1, L0756: 1, L0780: 1, L0752: 1, L0588: 1, L0592: 1, H0668: 1, H0422: 1, L0697: 1 and S0384: 1.

HKGBU67	1062496	960	779 - 201	3135			11
					Gly-1 to His-6, Thr-55 to Gln-61, Cys-63 to Asp-70, Gly-132 to Gly-137, Lys-146 to Gly-152, Pro-174 to Lys-182.	H0039: 1, T0006: 1, H0032: 1, H0090: 1, H0268: 1, H0413: 1, H0509: 1, L0375: 1, L0789: 1, L0666: 1, S0126: 1, H0670: 1, H0539: 1, H0521: 1, S0032: 1, L0754: 1, L0779: 1, L0759: 1, H0444: 1 and S0434: 1.	L0777: 6, S0358: 3, L0372: 3, L0750: 3, L0755: 3, S0422: 2, L0766: 2, L0663: 2, S0152: 2, L0779: 2, L0588: 2, L0605: 2, H0685: 1, H0341: 1, H0255: 1, S0376: 1, S0410: 1, H0592: 1, H0497: 1, H0009: 1, L0471: 1, H0373: 1, S0214: 1, H0615: 1, H0090: 1, H0494: 1, H0509: 1, H0538: 1, L0769: 1, L0761: 1, L0646: 1, L0764: 1, L0771: 1, L0773: 1, L0794: 1, L0774: 1, L0775: 1, L0655: 1, L0789: 1, L0665: 1,

						Contigs/fragments
						H0697: 1, H0520: 1, H0435: 1, S0044: 1, H0555: 1, L0747: 1, L0749: 1, L0753: 1, L0759: 1, H0445: 1, L0581: 1, H0423: 1 and H0712: 1.
HFKIT82	1062544	961	2 - 1663	3136	Pro-10 to Val-15, Ala-42 to Lys-48, Asn-99 to Glu-104, Ile-114 to Gln-119, Asp-130 to Gly-137, Leu-167 to Tyr-175, Pro-187 to Glu-192, Arg-219 to Pro-224, Ala-233 to Thr-240.	AR039: 4, AR089: 3, AR055: 3, AR096: 3, AR060: 2, AR053: 2, AR104: 2, AR061: 1, AR033: 1 L0439: 6; H0620: 4, L0758: 2, S0040: 1, H0661: 1, H0619: 1, H0549: 1, H0587: 1, H0013: 1, L0021: 1, H0230: 1, H0373: 1, H0135: 1, L0770: 1, L0769: 1, L0776: 1, L0659: 1, L0783: 1, H0144: 1, H0519: 1, H0593: 1, H0682: 1, H0659: 1, L0751: 1, L0753: 1 and L0759: 1.
HE2LW42	1062574	962	1300 - 1079	3137		H0624: 5, L0748: 4, S0222: 3, H0441: 2, H0013: 2, H0144: 2, L0745: 2, H0170: 1, H0171: 1, S0007: 1,

HOGCE44	1062586	963	141 - 2561	3138	Glu-46 to Ser-59, Asn-85 to Ser-98.	H0156: 1, L0471: 1, H0051: 1, H0604: 1, H0135: 1, S0386: 1, L0521: 1, L0776: 1 and L0754: 1. / L0743: 7, L0731: 7, H0024: 5, H0264: 5, H0547: 5, L0439: 5, L0756: 5, L0764: 4, L0777: 4, L0752: 4, H0622: 3, H0163: 3, S0386: 3, H0529: 3, L0769: 3, L0809: 3, H0144: 3, H0435: 3, L0748: 3, L0747: 3, S0412: 3, S0040: 2, S0116: 2, H0341: 2, S0358: 2, S0444: 2, S0360: 2, H0549: 2, H0013: 2, H0036: 2, S0010: 2, H0318: 2, S0474: 2, H0050: 2, H0083: 2, H0266: 2, H0615: 2, T0006: 2, H0031: 2, H0644: 2, H0135: 2, S0002: 2, L0770: 2, L0771: 2, L0649: 2, L0803: 2, L0776: 2, L0438: 2, H0520: 2, H0539: 2,	20p13	192340, 234200

H0518: 2, S0404: 2, S3014: 2, S0028: 2, L0741: 2, L0751: 2, L0750: 2, S0434: 2, L0605: 2, L0591: 2, L0362: 2, H0624: 1, H0171: 1, H0265: 1, S6024: 1, S0134: 1, H0583: 1, L0414: 1, S0282: 1, H0402: 1, S0356: 1, S0442: 1, S0376: 1, S0132: 1, H0619: 1, L0717: 1, H0437: 1, H0550: 1, H0600: 1, H0587: 1, H0486: 1, T0114: 1, H0635: 1, S0280: 1, H0042: 1, H0575: 1, H0590: 1, T0048: 1, H0581: 1, H0052: 1, H0596: 1, H0009: 1, L0471: 1, T0010: 1, S6028: 1, H0188: 1, H0428: 1, L0483: 1, H0553: 1, H0032: 1, H0674: 1, H0124: 1, S0036: 1, H0090: 1, H0591: 1, H0038: 1, H0616: 1, H0551: 1, H0268: 1, H0623: 1,

| HOVJJ72 | 1062626 | 964 | 547 - 1782 | 3139 | His-30 to His-35. | H0100: 1, H0560: 1, S0142: 1, H0538: 1, S0422: 1, S0426: 1, L0762: 1, L0763: 1, L0638: 1, L0761: 1, L0772: 1, L0768: 1, L0794: 1, L0766: 1, L0775: 1, L0375: 1, L0655: 1, L0783: 1, L0519: 1, L0789: 1, L0791: 1, L0666: 1, L0664: 1, S0374: 1, S0126: 1, H0689: 1, H0659: 1, H0521: 1, S0176: 1, S0406: 1, H0436: 1, L0759: 1, S0031: 1, S0260: 1, S0436: 1, L0608: 1, S0011: 1, S0242: 1, S0194: 1, S0276: 1, H0542: 1 and S0460: 1. L0777: 5, L0750: 4, L0758: 4, H0549: 2, H0550: 2, H0333: 2, H0687: 2, H0688: 2, L0809: 2, L0743: 2, H0265: 1, H0556: 1, S0358: 1, H0645: 1, H0599: 1, H0575: 1, H0618: 1, H0123: 1, | 19q13.1-q13.2 | 107741, 113900, 122720, 122720, 126340, 126391, 160900, 164731, 172400, |

						Clones	Chrom.	OMIM
						H0428: 1, H0163: 1, H0646: 1, L0770: 1, L0769: 1, L0637: 1, L0772: 1, L0774: 1, L0378: 1, L0806: 1, L0663: 1, S0330: 1, H0539: 1, S0190: 1, H0540: 1, L0744: 1, L0748: 1, L0747: 1, L0779: 1, L0780: 1, L0731: 1, S0276: 1 and S0424: 1.		172400, 173850, 180901, 180901, 207750, 221770, 248600, 258501, 600918, 602716
HODBT14	1062628	965	3 - 326	3140	Gln-1 to Glu-8, Ser-17 to Asn-23, Glu-48 to Leu-54, Asn-78 to Ser-83.	H0328: 2 and H0581: 1.		
HBOEB83	1062629	966	1 - 1392	3141	Ala-1 to Ser-6, Thr-16 to Gln-23, Pro-28 to Asn-34, Glu-43 to Cys-49, Asp-95 to Gly-100.	H0328: 9, L0659: 7, L0662: 6, H0135: 4, L0750: 4, S0360: 3, H0329: 3, H0373: 3, L0375: 3, L0744: 3, H0392: 2, H0046: 2, S0364: 2, H0163: 2, H0100: 2, L0743: 2, S0356: 1, S0222: 1, H0486: 1, H0618: 1, H0439: 1, L0471: 1, S0362: 1, H0038: 1, L0520: 1, L0769: 1, L0637: 1, L0650: 1,	5q13	126060, 143200, 143200, 181510, 253200, 268800, 268800, 600354, 600354, 600354

HODCT96	1062631	967	2 - 541	3142	Lys-1 to Glu-7, Thr-20 to Glu-35, Ser-54 to Glu-62.	L0789: 1, L0664: 1, H0144: 1, H0690: 1, H0660: 1, S0028: 1, L0740: 1, L0759: 1, L0589: 1, S0242: 1 and H0352: 1.

AR039: 26, AR033: 17, AR104: 17, AR052: 15, AR053: 15, AR096: 14, AR060: 14, AR089: 13, AR055: 12, AR061: 7

H0617: 8, L0747: 8, L0769: 6, L0665: 5, L0758: 5, L0717: 4, L0794: 4, L0766: 4, L0659: 4, L0748: 4, H0181: 3, H0494: 3, L0638: 3, L0666: 3, H0658: 3, L0750: 3, L0757: 3, H0657: 2, H0255: 2, H0431: 2, H0318: 2, H0328: 2, T0006: 2, H0396: 2, S0426: 2, L0770: 2, L0771: 2, L0375: 2, L0805: 2, L0657: 2, L0384: 2, H0659: 2, L0744: 2, L0756: 2, L0779: 2, L0759: 2,

L0596: 2, L0588: 2, L0599: 2, L0593: 2, S0026: 2, H0265: 1, H0685: 1, H0341: 1, H0663: 1, S0418: 1, S0356: 1, S0358: 1, S0360: 1, S0132: 1, H0411: 1, H0550: 1, S0222: 1, H0441: 1, L0477: 1, L0021: 1, S0346: 1, T0048: 1, H0309: 1, H0009: 1, H0172: 1, L0483: 1, H0031: 1, H0628: 1, H0673: 1, H0674: 1, H0040: 1, H0551: 1, H0412: 1, T0004: 1, H0102: 1, L0351: 1, H0280: 1, H0560: 1, H0633: 1, S0344: 1, L0762: 1, L0501: 1, L0372: 1, L0764: 1, L0768: 1, L0803: 1, L0650: 1, L0806: 1, L0776: 1, L0656: 1, L0783: 1, L0790: 1, L2269: 1, L0565: 1, L0438: 1, H0547: 1, H0689: 1, H0435: 1, H0660: 1, H0672: 1,

Gene	Contig	ORF	nt range	No.	Signal peptide / domain regions	Clone vocabulary	Chromosome	OMIM
HTXJE60	1062655	968	60 - 1124	3143	Asp-32 to Leu-43, Leu-47 to Arg-53, Glu-95 to Phe-102, Leu-123 to Val-130, Leu-146 to Gly-154, Asp-186 to Glu-192, Glu-246 to Ser-255, Asp-296 to Arg-302, Ser-334 to Ala-347.	S0330: 1, S0406: 1, H0576: 1, L0742: 1, L0439: 1, L0740: 1, L0751: 1, L0754: 1, L0749: 1, L0752: 1, L0755: 1, L0731: 1, S0031: 1, H0445: 1, L0587: 1, L0592: 1, L0485: 1, L0595: 1, L0601: 1, H0668: 1, S0192: 1 and S0194: 1. S0360: 2, H0266: 2, S0330: 2, L0748: 2, H0556: 1, S0442: 1, S0358: 1, S0046: 1, L0471: 1, H0024: 1, H0634: 1, H0494: 1, H0560: 1, L0800: 1, L0803: 1, H0593: 1, H0435: 1, H0651: 1, H0521: 1, H0522: 1, S0406: 1, L0747: 1 and S0452: 1.		
HUSIQ62	1062679	969	83 - 814	3144	Thr-1 to Glu-10, Arg-20 to Leu-26, Gly-37 to Ser-49, Cys-58 to Ser-69, Lys-79 to Lys-85, Ser-88 to Glu-96, Ala-99 to Ser-135,	S0422: 8, S0116: 7, H0710: 8, L0471: 7, H0542: 7, H0580: 6, T0042: 6, H0547: 6, H0659: 6, L0748: 6, H0486: 5, H0543: 5, H0656: 4, H0341: 4,	4q31	107250, 181600, 189800, 266300

H0457: 1, H0620: 1,
H0350: 1, H0629: 1,
H0375: 1, H0267: 1,
H0252: 1, H0553: 1,
S0366: 1, H0163: 1,
H0090: 1, H0040: 1,
H0264: 1, H0413: 1,
L0475: 1, H0560: 1,
H0561: 1, H0641: 1,
H0538: 1, L0769: 1,
L5575: 1, L0761: 1,
L0373: 1, L0372: 1,
L0800: 1, L0768: 1,
L0364: 1, L0774: 1,
L0806: 1, L0652: 1,
L0657: 1, L0656: 1,
L3872: 1, L5623: 1,
L0789: 1, L0790: 1,
L0792: 1, L0663: 1,
L0664: 1, L0665: 1,
H0702: 1, H0699: 1,
S0374: 1, H0723: 1,
H0726: 1, H0520: 1,
H0519: 1, S0126: 1,
H0682: 1, H0683: 1,
H0684: 1, H0660: 1,
H0666: 1, S0328: 1,
S0380: 1, H0696: 1,
L0744: 1, L0779: 1,
L0755: 1, H0445: 1,

						S0434: 1, L0591: 1 and S0026: 1.
HPCTC48	1062686	970	206 - 361	3145	Arg-1 to Gly-14, Glu-24 to Ile-34, Glu-40 to Phe-52.	H0659: 1 and L0758: 1.
HKBAK29	1062718	971	945 - 1562	3146	Glu-16 to Ser-23, Tyr-32 to Ala-44, Leu-56 to Ala-70, Ser-85 to Thr-91, Glu-102 to Lys-108, Glu-116 to Leu-122, Leu-136 to Leu-150, Glu-165 to Leu-170, Val-183 to Asp-191.	AR096: 7, AR104: 7, AR089: 5, AR033: 4, AR060: 4, AR053: 2, AR061: 1, AR055: 0, AR039: 0 S0358: 6, L0659: 6, L0805: 3, L0655: 3, L0665: 3, H0670: 3, L0755: 3, S0026: 3, S0360: 2, S0003: 2, L0649: 2, L0774: 2, L0776: 2, L0666: 2, L0663: 2, L0777: 2, L0758: 2, H0624: 1, H0170: 1, T0002: 1, H0656: 1, H0638: 1, H0637: 1, L0717: 1, S0278: 1, S0222: 1, H0497: 1, H0642: 1, H0574: 1, H0632: 1, H0486: 1, H0156: 1, L0021: 1, H0036: 1, H0251: 1, H0046: 1, L0157: 1, L0471: 1, H0083: 1, S0214: 1,

HPMCX26	1062743	972	329 - 682	3147	Ser-12 to Trp-23, Tyr-25 to Tyr-32, Pro-34 to Phe-41.	H0039: 1, H0644: 1, H0165: 1, H0674: 1, H0090: 1, H0040: 1, H0412: 1, H0413: 1, H0625: 1, H0529: 1, L0646: 1, L0768: 1, L0766: 1, L0803: 1, L0775: 1, L0784: 1, L0634: 1, L0783: 1, H0520: 1, S0126: 1, H0689: 1, H0683: 1, H0666: 1, H0648: 1, H0539: 1, H0521: 1, S0044: 1, S3014: 1, L0744: 1, L0756: 1, L0752: 1, L0757: 1, L0592: 1, L0485: 1, H0423: 1, H0422: 1 and H0506: 1. L0599: 2, H0271: 1, H0031: 1 and H0623: 1.
HFKHF51	1062785	973	3 - 1910	3148		L0747: 4, H0620: 3, S0051: 3, H0424: 3, L0749: 3, L0756: 3, L0755: 3, H0295: 2, S0300: 2, H0333: 2, H0024: 2, H0100: 2, L0794: 2, L0774: 2, H0672: 2, L0744: 2,

HUCPE28	1062795	974	71 - 1090	3149			
				Lys-16 to Gly-23, Glu-33 to Val-43, Ser-55 to Ala-67, Gln-82 to Pro-97, Thr-108 to Gln-124, Pro-151 to Glu-157, Leu-184 to Cys-194, Ala-218 to Pro-225, Pro-227 to Asp-243, Lys-304 to Ser-324.	AR096: 1, AR055: 1, AR089: 1, AR061: 0, AR060: 0, AR033: 0, AR052: 0, AR104: 0 L0766: 11, H0622: 5, H0716: 2, S0420: 2, L0769: 2, L0803: 2, L0779: 2, H0656: 1, H0484: 1, S0418: 1, S0444: 1, H0580: 1, H0730: 1, H0619: 1, H0411: 1, H0592: 1,	L0754: 2, L0777: 2, L0731: 2, L0759: 2, S0412: 2, S0420: 1, S0222: 1, S0005: 1, S0049: 1, H0320: 1, S0250: 1, H0213: 1, H0417: 1, H0068: 1, L0564: 1, H0494: 1, L0771: 1, L0803: 1, L0775: 1, L0382: 1, L0809: 1, L0367: 1, L0787: 1, L0791: 1, L0793: 1, S0126:1, H0690: 1, S0380: 1, L0612: 1, S3014: 1, L0779: 1, L0757: 1, S0260: 1, L0592: 1 and L0603: 1.

HPWAH30	1062840	975	1 - 708	3150	Phe-12 to Thr-19, Thr-26 to Cys-36, Thr-45 to Lys-50, Thr-54 to Gly-65, His-81 to Lys-88, Thr-110 to Lys-116, Phe-124 to Thr-131, Thr-138 to Lys-144, Ser-156 to Thr-162, His-165 to Lys-172, Asn-181 to Thr-187, Thr-194 to Lys-200, Thr-222 to Glu-230.	H0427: 1, H0581: 1, H0052: 1, H0494: 1, L0774: 1, L0775: 1, L4501: 1, L0665: 1, S0374: 1, H0539: 1, S0404: 1, L0743: 1, L0745: 1, L0749: 1, L0777: 1, L0752: 1, S0436: 1 and L0097: 1. / L0361: 2, H0170: 1, H0341: 1, H0663: 1, S0358: 1, S0045: 1, H0392: 1, H0586: 1, H0488: 1, H0509: 1, L0763: 1, L0665: 1, S0044: 1, L0779: 1 and L0593: 1.
H6EDQ51	H6EDQ51R	976	91 - 303	3151		
HA5AU29	HA5AU29R	977	2 - 190	3152	Arg-1 to Cys-10.	
HACBX26	HACBX26R	978	2 - 124	3153		
HACMD23	HACMD23R	979	1 - 81	3154		
HACMF32	HACMF32R	980	52 - 342	3155		
HACMH54	HACMH54R	981	2 - 199	3156		
HACMH72	HACMH72R	982	2 - 478	3157		H0713: 5, H0684: 2,

HACMM26	HACMM26R	983	1 - 84	3158	H0685: 1, H0689: 1 and H0683: 1.
HACMM56	HACMM56R	984	221 - 451	3159	H0685: 2, S0422: 1, L0766: 1 and L0526: 1.
HACMS55	HACMS55R	985	3 - 116	3160	Ser-9 to Phe-14.
HACMX77	HACMX77R	986	3 - 419	3161	Glu-113 to Gly-118. L0747: 25, S0358: 11, L0755: 9, L0740: 7, L0758: 7, L0775: 6, H0659: 6, L0742: 6, H0545: 5, S0406: 5, L0750: 5, L0756: 5, L0757: 5, L0362: 5, S0026: 5, H0580: 4, S0007: 4, H0413: 4, H0494: 4, S0440: 4, L0520: 4, L0769: 4, L0731: 4, H0543: 4, H0295: 3, H0341: 3, S0444: 3, H0581: 3, H0529: 3, L0770: 3, L0766: 3, L0382: 3, H0436: 3, L0744: 3, L0361: 3, H0686: 2, S0134: 2, S0218: 2, H0419: 2, H0484: 2, S0442: 2, S0360: 2, S0045: 2, H0486: 2, H0427: 2, L0021: 2, H0594: 2, T0023: 2,

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H0696: 1, H0555: 1,	
S0392: 1, H0478: 1,	
H0631: 1, S3012: 1,	

HACMZ45	HACMZ45R	987	3 - 245	3162	Thr-11 to Gly-16, Ser-49 to Ser-55, Ile-64 to Gly-69.	L0779: 1, L0753: 1, S0434: 1, L0588: 1, L0485: 1, H0668: 1, H0653: 1, H0136: 1, S0196: 1, H0542: 1, H0422: 1 and H0008: 1.
HACND54	HACND54R	988	2 - 274	3163	Gln-1 to Lys-6.	H0617: 9, H0618: 4, H0253: 4, H0545: 4, L0774: 4, L0439: 4, L0750: 4, L0766: 3, L0803: 3, L0806: 3, L0748: 3, L0747: 3, L0777: 3, L0752: 3, L0758: 3, H0685: 2, H0333: 2, H0559: 2, H0100: 2, L0644: 2, L0542: 2, L0565: 2, L0438: 2, L0587: 2, S0040: 1, S0114: 1, H0589: 1, S0418: 1, S0420: 1, S0356: 1, S0376: 1, H0580: 1, H0351: 1, H0411: 1, S0278: 1, H0549: 1, S0222: 1, H0431: 1, H0438: 1, T0109: 1, H0427: 1, S0280: 1,

HACND56	HACND56R	989	166 - 318	3164		
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HACNE40	HACNE40R	990	229 - 426	3165		H0616: 3, L0665: 3, L0794: 2, L0659: 2, L0779: 2, H0423: 2, H0171: 1, H0685: 1, H0675: 1, S0408: 1, H0013: 1, L0105: 1, H0581: 1, T0110: 1, S0214: 1, H0622: 1, H0561: 1, S0002: 1, H0529: 1, L0762: 1, L0667: 1, L0766: 1, L0805: 1, L0655: 1, L0658: 1, L0790: 1, H0702: 1, H0648: 1, H0521: 1, L0748: 1, L0777: 1, L0758: 1 and L0366: 1.
HACNF21	HACNF21R	991	3 - 542	3166	Asp-30 to Thr-37, Lys-81 to Glu-87.	
HACNF41	HACNF41R	992	2 - 91	3167	Ile-13 to Gly-18.	
HACNI47	HACNI47R	993	39 - 500	3168	Val-23 to Lys-30, Tyr-40 to Asn-50, Lys-63 to Lys-68, Leu-92 to Asn-102.	AR089: 18, AR060: 15, AR104: 14, AR096: 9, AR055: 6, AR061: 4
HACNI86	HACNI86R	994	239 - 370	3169		L0754: 12, L0740: 8, L0731: 8, S0003: 6, L0649: 6, H0620: 5, S0214: 5, L0766: 5,

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H0670: 1, H0651: 1,

HADDD29	HADDD29R	995	181 - 342	3170	Asn-14 to Thr-26.	H0539: 1, H0710: 1, S0152: 1, H0522: 1, H0696: 1, S0044: 1, S0406: 1, H0478: 1, L0756: 1, L0753: 1, S0031: 1, H0595: 1, S0434: 1, L0592: 1, S0011: 1, H0653: 1, S0192: 1, S0242: 1, H0542: 1, H0543: 1 1 and H0422: 1.
HADET44	HADET44R	996	2 - 304	3171		
HAHGU75	HAHGU75R	997	1 - 501	3172		
HAHHD12	HAHHD12R	998	1 - 96	3173	Leu-3 to Met-9, Gln-24 to Thr-32.	
HALSG11	HALSG11R	999	2 - 364	3174	Ser-25 to Cys-36, Gln-39 to Asp-56.	
HANGA96	HANGA96R	1000	40 - 246	3175	Asn-49 to Asp-54.	
HAOSA43	HAOSA43R	1001	61 - 222	3176		L0759: 8, S0010: 7, L0742: 7, L0455: 6, S0007: 5, L0809: 4, L0439: 4, H0013: 3, L0768: 3, L0753: 3, H0686: 2, S0134: 2, S0222: 2, H0052: 2, H0024: 2, L0769: 2, L0638: 2, L0521: 2, L0794: 2, L0438: 2, L0589: 2, L0608: 2,

HAOSB87	HAOSB87R	1002	1 - 348	3177	Val-77 to Val-86.	H0543: 2, H0341: 1, H0441: 1, H0586: 1, S0346: 1, S0049: 1, H0569: 1, H0050: 1, T0010: 1, H0598: 1, H0272: 1, L0666: 1, H0144: 1, H0689: 1, L0747: 1, L0366: 1 and H0423: 1.
HAOSC40	HAOSC40R	1003	55 - 327	3178	Pro-69 to Leu-76.	L0766: 8, L0803: 7, L0731: 7, L0758: 5, S0358: 4, S0360: 4, L0794: 4, H0547: 4, S0440: 3, L0662: 3, L0659: 3, L0809: 3, L0666: 3, L0663: 3, S0374: 3, L0755: 3, L0596: 3, H0543: 3, H0583: 2, H0004: 2, H0622: 2, L0194: 2, H0038: 2, S0422: 2, L0771: 2, L0551: 2, L0774: 2, L0655: 2, L0526: 2, L0665: 2, H0659: 2, L0747: 2, L0750: 2, L0756: 2, S0436: 2, H0624: 1, H0170: 1, H0159: 1, H0686: 1, H0685: 1,

HAOSE70	HAOSE70R	1004	85 - 273		3179
HAOSF68	HAOSF68R	1005	1 - 630	H0650: 1, H0657: 1, S0116: 1, H0341: 1, S0442: 1, S0376: 1, S0444: 1, H0619: 1, L0717: 1, H0411: 1, S0222: 1, H0587: 1, H0497: 1, H0427: 1, H0042: 1, H0596: 1, T0110: 1, H0081: 1, H0050: 1, H0687: 1, S0003: 1, H0252: 1, H0213: 1, H0163: 1, H0591: 1, H0634: 1, H0616: 1, H0063: 1, H0413: 1, H0100: 1, H0529: 1, L0638: 1, L0637: 1, L0800: 1, L0764: 1, L0773: 1, L0521: 1, L0768: 1, L0784: 1, L0783: 1, L0788: 1, L0790: 1, L0664: 1, H0436: 1, S0392: 1, H0627: 1, L0748: 1, L0754: 1, L0749: 1, L0759: 1, H0445: 1, S0434: 1, H0423: 1, S0412: 1 and S0424: 1.	3180

						Clones
HAOSG95	HAOSG95R	1006	51 - 485	3181	Arg-5 to Arg-17, Asp-25 to Val-31.	H0585: 27, H0556: 17, L0595: 15, L0591: 13, L0593: 13, H0046: 12, H0543: 12, H0521: 11, L0747: 11, L0596: 11, H0265: 10, H0040: 10, H0266: 9, H0038: 9, H0494: 9, L0588: 9, H0656: 8, H0581: 8, H0617: 8, L0664: 8, H0519: 8, L0601: 8, L0163: 7, H0083: 7, H0529: 7, L0665: 7, L0602: 7, H0657: 6, H0599: 6, H0618: 6, H0318: 6, H0551: 6, L0666: 6, H0547: 6, H0542: 6, H0141: 5, H0402: 5, S0358: 5,
HAOSI79	HAOSI79R	1007	1 - 543	3182	Val-7 to Glu-13, Thr-20 to Arg-26, Lys-34 to Phe-40, Arg-46 to Lys-51.	
HAOSJ27	HAOSJ27R	1008	2 - 166	3183	Lys-27 to Gln-39, Gln-47 to Thr-52.	
HAOSJ33	HAOSJ33R	1009	3 - 353	3184	Leu-3 to Glu-14, Ser-95 to Ala-105.	
HAOSJ73	HAOSJ73R	1010	1 - 114	3185		
HAOSK38	HAOSK38R	1011	1 - 303	3186	Pro-24 to Val-49, Tyr-51 to Leu-56.	

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HAOSL36	HAOSL36R	1012	3 - 269	3187	
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H0435: 2, H0626: 2,
H0627: 2, L0439: 2,
L0756: 2, L0779: 2,
L0758: 2, L0759: 2,
L0605: 2, L0592: 2,
L0593: 2, L0595: 2,
H0543: 2, H0265: 1,
H0686: 1, H0657: 1,
H0484: 1, H0669: 1,
S0356: 1, S0444: 1,
H0675: 1, H0393: 1,
S0278: 1, H0613: 1,
H0497: 1, H0331: 1,
H0486: 1, H0618: 1,
H0253: 1, T0048: 1,
H0052: 1, T0110: 1,
H0544: 1, H0246: 1,
H0051: 1, H0355: 1,
H0594: 1, H0039: 1,
H0622: 1, S0368: 1,
H0030: 1, H0376: 1,
H0135: 1, H0038: 1,
H0087: 1, H0272: 1,
H0412: 1, H0413: 1,

| HAOSL47 | HAOSL47R | 1013 | 2 - 409 | 3188 | Thr-12 to Thr-17, Leu-31 to Met-36, Pro-97 to Lys-103, Gln-126 to Trp-136. | H0056: 1, H0623: 1, L0564: 1, T0041: 1, S0150: 1, H0633: 1, S0144: 1, H0538: 1, S0210: 1, S0002: 1, L0369: 1, L0506: 1, L0500: 1, L0501: 1, L0646: 1, L0374: 1, L0765: 1, L0363: 1, L0381: 1, L0803: 1, L0653: 1, L0493: 1, L0526: 1, L0783: 1, L0383: 1, L0666: 1, L0663: 1, S0006: 1, H0593: 1, S0126: 1, H0711: 1, H0682: 1, H0670: 1, H0672: 1, H0651: 1, S0152: 1, S0454: 1, S0262: 1, L0356: 1, S0390: 1, L0747: 1, L0780: 1, L0753: 1, L0755: 1, L0757: 1, H0707: 1, L0485: 1, L0599: 1, L0608: 1, L0601: 1, H0667: 1 and H0008: 1. L0748: 23, S0358: 12, H0616: 10, L0750: 8, L0752: 8, L0596: 8, H0031: 7, H0494: 7, |

L0731: 7, L0758: 7,   H0556: 6, H0024: 6,   L0770: 6, L0588: 6,   S0360: 5, S0046: 5,   S0476: 5, L0774: 5,   H0547: 5, L0439: 5,   L0740: 5, L0749: 5,   L0755: 5, S0420: 4,   S0250: 4, H0039: 4,   H0135: 4, H0551: 4,   L0766: 4, H0144: 4,   S0126: 4, L0742: 4,   L0743: 4, L0747: 4,   L0757: 4, L0591: 4,   H0170: 3, H0663: 3,   S0444: 3, H0486: 3,   H0200: 3, H0188: 3,   H0038: 3, H0100: 3,   L0769: 3, L0773: 3,   L0775: 3, S0031: 3,   H0445: 3, H0136: 3,   H0542: 3, H0543: 3,   H0624: 2, H0717: 2,   S0212: 2, H0484: 2,   H0255: 2, S0418: 2,   S0408: 2, S0410: 2,   H0393: 2, H0351: 2,   H0411: 2, S0222: 2,   H0592: 2, H0574: 2,   H0635: 2, H0427: 2,

| H0036: 2, H0318: 2, |
| H0545: 2, H0009: 2, |
| H0178: 2, H0014: 2, |
| H0644: 2, H0617: 2, |
| H0032: 2, H0124: 2, |
| H0068: 2, H0040: 2, |
| T0067: 2, H0413: 2, |
| H0623: 2, T0041: 2, |
| T0042: 2, S0440: 2, |
| S0150: 2, H0641: 2, |
| H0529: 2, L0502: 2, |
| L0500: 2, L0761: 2, |
| L0764: 2, L0662: 2, |
| L0767: 2, L0776: 2, |
| L0657: 2, L0659: 2, |
| L0782: 2, L0783: 2, |
| H0690: 2, H0659: 2, |
| H0672: 2, S0328: 2, |
| H0134: 2, H0555: 2, |
| S3012: 2, L0754: 2, |
| L0759: 2, L0590: 2, |
| L0592: 2, L0593: 2, |
| L0594: 2, H0265: 1, |
| T0002: 1, H0686: 1, |
| S0040: 1, S0134: 1, |
| H0583: 1, H0657: 1, |
| H0341: 1, S0180: 1, |
| H0483: 1, H0661: 1, |
| H0664: 1, S0356: 1, |
| S0442: 1, S0376: 1, |

H0580: 1, S0007: 1,
S0132: 1, L0717: 1,
H0431: 1, H0370: 1,
H0392: 1, H0600: 1,
H0586: 1, H0333: 1,
L0622: 1, T0060: 1,
T0109: 1, H0013: 1,
H0250: 1, H0069: 1,
L0021: 1, H0599: 1,
H0575: 1, H0618: 1,
S0182: 1, H0251: 1,
H0263: 1, H0596: 1,
L0738: 1, H0041: 1,
H0081: 1, H0012: 1,
H0620: 1, L0163: 1,
S0388: 1, S0051: 1,
H0375: 1, H0266: 1,
H0271: 1, H0687: 1,
H0290: 1, S0003: 1,
S0022: 1, H0428: 1,
L0194: 1, H0553: 1,
H0628: 1, H0673: 1,
H0169: 1, L0456: 1,
H0708: 1, S0366: 1,
S0036: 1, H0163: 1,
H0090: 1, H0591: 1,
H0087: 1, L0060: 1,
H0379: 1, H0412: 1,
H0560: 1, S0382: 1,
S0466: 1, S0438: 1,

HAOSP50	HAOSP50R	1014	183 - 380	3189	Ser-53 to Pro-60.	H0509: 1, S0210: 1, L0520: 1, L0762: 1, L0501: 1, L0765: 1, L0771: 1, L0521: 1, L0768: 1, L0387: 1, L0498: 1, L0375: 1, L0806: 1, L0655: 1, L0661: 1, L0807: 1, L0527: 1, L0382: 1, L0809: 1, L0519: 1, L0663: 1, S0428: 1, S0374: 1, H0723: 1, H0519: 1, H0593: 1, H0658: 1, H0648: 1, H0651: 1, S0330: 1, H0539: 1, S0378: 1, H0710: 1, S0152: 1, H0521: 1, H0522: 1, S0044: 1, H0576: 1, S0390: 1, S0028: 1, S0124: 1, S0032: 1, L0753: 1, S0434: 1, L0485: 1, L0581: 1, L0595: 1, L0366: 1, S0106: 1, H0668: 1, S0026: 1, H0653: 1, H0665: 1, S0194: 1, H0423: 1, H0422: 1, S0456: 1 and H0352: 1.

HAOSS30	HAOSS30R	1015	3 - 509	3190		
					Pro-11 to His-21, Glu-30 to Glu-41, Arg-55 to Ser-64, Arg-89 to Thr-96, Cys-99 to Gln-106, Pro-116 to His-124.	L0439: 16, S0222: 5, H0733: 4, L0770: 4, L0809: 4, L0747: 4, S0356: 3, L0471: 3, S0366: 3, L0766: 3, S0436: 3, H0556: 2, L0622: 2, H0373: 2, S6028: 2, H0266: 2, H0687: 2, H0617: 2, L0637: 2, L0803: 2, L0789: 2, H0518: 2, L0748: 2, S0434: 2, L0604: 2, H0686: 1, S0040: 1, H0583: 1, S0001: 1, S0420: 1, H0729: 1, H0722: 1, H0619: 1, H0333: 1, H0318: 1, H0007: 1, H0052: 1, H0009: 1, L0163: 1, H0051: 1, H0428: 1, H0181: 1, S0364: 1, H0708: 1, H0135: 1, H0413: 1, S0440: 1, L5575: 1, L0764: 1, L0375: 1, L0378: 1, L0652: 1, L0438: 1, S0126: 1, H0658: 1, H0539: 1, L0740: 1, L0749: 1, L0779: 1, L0752: 1 and

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PCT/US01/18569

| HAOSU85 | HAOSU85R | 1016 | 2 - 508 | 3191 | His-1 to Phe-7, Pro-16 to His-26, Asp-44 to Ser-52. | L0758: 1. H0686: 2, L0362: 2, H0100: 1, H0646: 1 and L0766: 1. |
| HAOSW92 | HAOSW92R | 1017 | 93 - 317 | 3192 | | L0777: 8, L0754: 6, L0662: 4, L0766: 4, S0136: 3, S0406: 2, L0744: 2, L0780: 2, L0752: 2, L0594: 2, H0556: 1, H0686: 1, S0418: 1, S0376: 1, S0360: 1, H0580: 1, H0587: 1, H0486: 1, S0280: 1, L0021: 1, L0105: 1, H0428: 1, L0055: 1, H0212: 1, H0040: 1, S0422: 1, L0639: 1, L5575: 1, L0772: 1, L0372: 1, L0764: 1, L0794: 1, L0522: 1, L0803: 1, L0659: 1, L0529: 1, L0665: 1, H0144: 1, H0547: 1, H0519: 1, H0684: 1, H0659: 1, H0670: 1, L0748: 1, L0756: 1, L0757: 1, L0758: 1, L0759: 1, L0596: 1, L0589: 1, L0605: 1, L0599: 1, |

HAOTB47	HAOTB47R	1018	3 - 107	3193	
HAOTB58	HAOTB58R	1019	336 - 485	3194	Ile-3 to Asp-9.

H0667: 1, H0542: 1 and H0506: 1.

L0756: 6, L0777: 6, S0408: 5, L0770: 5, H0547: 5, S0360: 4, L0665: 4, H0624: 3, H0687: 3, H0170: 2, H0686: 2, L0717: 2, H0497: 2, L0163: 2, L0794: 2, L0766: 2, S0126: 2, L0752: 2, L0731: 2, H0657: 1, H0656: 1, L0808: 1, H0341: 1, S0282: 1, S0442: 1, S0354: 1, S0045: 1, S0222: 1, H0486: 1, L0586: 1, H0156: 1, H0575: 1, H0318: 1, H0581: 1, H0052: 1, L0738: 1, H0266: 1, H0553: 1, H0169: 1, S0036: 1, H0087: 1, H0413: 1, S0422: 1, L0598: 1, L0520: 1, L0763: 1, L0638: 1, L0764: 1, L0803: 1, L0776: 1, L0658: 1, L0659: 1, L0809: 1, L0789: 1,

HAOTD32	HAOTD32R	1020	209 - 340	3195	
					L0664: 1, S0374: 1, H0520: 1, H0659: 1, H0670: 1, H0672: 1, H0436: 1, S0028: 1, L0439: 1, H0445: 1, L0589: 1, L0608: 1, S0192: 1, H0543: 1, H0423: 1, S0424: 1 and L0600: 1.
					L0747: 28, S0192: 21, L0659: 17, L0740: 12, L0757: 10, S0360: 9, H0545: 9, L0662: 9, L0775: 9, L0665: 9, L0439: 9, L0664: 8, S0358: 7, L0666: 7, L0750: 7, L0601: 7, L0777: 6, L0731: 6, L0471: 5, S0003: 5, H0038: 5, H0547: 5, S0206: 5, L0748: 5, L0756: 5, L0752: 5, L0758: 5, S0011: 5, S0026: 5, T0049: 4, L0717: 4, H0575: 4, H0012: 4, H0620: 4, H0083: 4, H0090: 4, L0770: 4, L0764: 4, L0794: 4, L0766: 4, L0804: 4, L0375: 4,

L0806: 4, L0754: 4,
L0779: 4, L0596: 4,
L0588: 4, L0581: 4,
L0603: 4, H0556: 3,
H0431: 3, H0370: 3,
S0010: 3, H0596: 3,
S0388: 3, T0023: 3,
H0031: 3, H0264: 3,
L0564: 3, S0372: 3,
L0769: 3, L0667: 3,
L0521: 3, L0768: 3,
L0774: 3, L0657: 3,
L0783: 3, L0809: 3,
L0663: 3, S0126: 3,
S0122: 3, H0682: 3,
L0759: 3, L0591: 3,
H0352: 3, L0353: 2,
H0686: 2, S0040: 2,
H0295: 2, H0650: 2,
S0045: 2, S0046: 2,
S0132: 2, H0549: 2,
S0222: 2, H0427: 2,
H0156: 2, H0263: 2,
H0597: 2, H0546: 2,
H0046: 2, H0050: 2,
H0024: 2, T0010: 2,
H0375: 2, H0266: 2,
H0271: 2, H0030: 2,
H0553: 2, H0644: 2,
H0674: 2, H0135: 2,

H0591: 2, H0616: 2, H0412: 2, H0413: 2, H0059: 2, H0100: 2, S0002: 2, L0369: 2, L0520: 2, L0763: 2, L0637: 2, L0761: 2, L0372: 2, L0767: 2, L0649: 2, L0803: 2, L0776: 2, L0382: 2, L0565: 2, H0690: 2, H0659: 2, H0670: 2, H0660: 2, H0648: 2, H0672: 2, S0404: 2, S0406: 2, H0555: 2, H0478: 2, H0626: 2, H0627: 2, L0070: 2, S3014: 2, S0032: 2, L0741: 2, L0590: 2, L0592: 2, L0599: 2, L0593: 2, L0595: 2, H0543: 2, L0600: 2, H0170: 1, H0171: 1, H0265: 1, T0002: 1, H0140: 1, S0470: 1, H0294: 1, L0785: 1, S0212: 1, S0282: 1, H0484: 1, H0671: 1, H0663: 1, H0664: 1, H0662: 1, H0638: 1, L0005: 1, S0442: 1,

S0444: 1, H0676: 1,
H0208: 1, H0619: 1,
H0393: 1, S6022: 1,
H0369: 1, H0550: 1,
H0455: 1, H0587: 1,
H0333: 1, H0331: 1,
H0574: 1, H0559: 1,
T0039: 1, H0013: 1,
S0280: 1, H0097: 1,
H0042: 1, T0082: 1,
S0474: 1, H0581: 1,
S0049: 1, H0251: 1,
H0309: 1, H0235: 1,
H0011: 1, H0051: 1,
H0021: 1, H0510: 1,
H0594: 1, S0334: 1,
H0687: 1, S0250: 1,
S0214: 1, H0119: 1,
T0006: 1, H0628: 1,
H0617: 1, L0055: 1,
H0032: 1, H0169: 1,
H0124: 1, H0598: 1,
H0551: 1, T0067: 1,
H0128: 1, L0475: 1,
H0560: 1, H0561: 1,
S0352: 1, S0438: 1,
S0440: 1, H0132: 1,
H0641: 1, H0647: 1,
H0646: 1, S0344: 1,
S0426: 1, L0598: 1,

HAOTE06	HAOTE06R	1021	2 - 472	3196		
					H0529: 1, L0762: 1, L0646: 1, L0800: 1, L0771: 1, L0773: 1, L0388: 1, L0650: 1, L0378: 1, L0805: 1, L0653: 1, L0527: 1, L0558: 1, L0636: 1, L0526: 1, L0647: 1, L0367: 1, L0787: 1, L0788: 1, H0144: 1, H0691: 1, H0520: 1, H0519: 1, H0365: 1, H0435: 1, H0658: 1, S0380: 1, H0521: 1, H0696: 1, S0044: 1, H0436: 1, S3012: 1, L0786: 1, L0780: 1, L0755: 1, S0260: 1, H0444: 1, H0343: 1, H0595: 1, S0436: 1, L0480: 1, L0605: 1, L0608: 1, L0362: 1, L0366: 1 and S0196: 1.	L0803: 9, L0794: 8, L0740: 5, L0748: 4, L0439: 4, L0747: 4, L0438: 3, L0779: 3, L0758: 3, H0553: 2, L0646: 2, L0800: 2, L0804: 2, L0809: 2,	

HAOTF84	HAOTF84R	1022	68 - 208	3197	Lys-15 to Gln-22.	L0665: 2, H0670: 2, L0755: 2, L0608: 2, S0026: 2, H0170: 1, H0686: 1, H0717: 1, H0656: 1, S0444: 1, H0580: 1, H0156: 1, H0178: 1, H0014: 1, H0252: 1, H0615: 1, H0674: 1, H0090: 1, H0063: 1, L0637: 1, L0372: 1, L0764: 1, L0765: 1, L0662: 1, L0766: 1, L0649: 1, L0650: 1, L0806: 1, L0653: 1, L0657: 1, L0659: 1, L0517: 1, L0529: 1, L5622: 1, L0789: 1, L0790: 1, L0663: 1, L0664: 1, H0144: 1, H0723: 1, S0126: 1, H0659: 1, S0378: 1, S0152: 1, L0741: 1, L0777: 1, S0434: 1, L0594: 1, L0595: 1 and H0667: 1.	L0757: 13, L0731: 10, L0754: 7, L0770: 4, S0360: 3, H0553: 3, H0551: 3, L0769: 3, L0662: 3, L0659: 3,

L0747: 3, L0779: 3,
L0777: 3, L0755: 3,
H0686: 2, S0420: 2,
H0545: 2, L0471: 2,
H0673: 2, L0598: 2,
L0646: 2, L0794: 2,
L0806: 2, H0520: 2,
S0330: 2, H0436: 2,
L0740: 2, L0751: 2,
L0756: 2, L0599: 2,
S0011: 2, S0242: 2,
H0170: 1, L0002: 1,
L0808: 1, S0418: 1,
S0444: 1, L0717: 1,
H0587: 1, H0497: 1,
H0333: 1, H0632: 1,
T0039: 1, H0013: 1,
H0250: 1, L0021: 1,
H0052: 1, S0051: 1,
H0188: 1, S0003: 1,
S0022: 1, S0214: 1,
H0428: 1, H0031: 1,
H0628: 1, S0438: 1,
S0440: 1, H0647: 1,
L0763: 1, L0764: 1,
L0771: 1, L0648: 1,
L0649: 1, L0651: 1,
L0805: 1, L0652: 1,
L0655: 1, L0606: 1,
L0634: 1, L0542: 1,

HAOTF90	HAOTF90R	1023	3 - 176	3198	L0439: 5, S0026: 5, H0624: 4, H0413: 4, S0418: 3, H0580: 3, H0373: 3, H0038: 3, H0494: 3, H0144: 3, H0686: 2, S0358: 2, H0261: 2, S0222: 2, H0013: 2, H0581: 2, H0052: 2, H0545: 2, H0031: 2, H0529: 2, L0664: 2, S0027: 2, L0747: 2, L0777: 2, L0752: 2, L0755: 2,
					L0783: 1, L0809: 1, L0787: 1, L0666: 1, L0663: 1, H0144: 1, H0701: 1, S0374: 1, L0565: 1, H0547: 1, S0126: 1, H0682: 1, H0435: 1, H0659: 1, H0648: 1, H0539: 1, S0378: 1, S0406: 1, H0626: 1, S3012: 1, L0748: 1, L0749: 1, L0758: 1, L0759: 1, L0588: 1, L0589: 1, L0592: 1, L0593: 1, L0594: 1, H0653: 1, S0192: 1, S0194: 1 and H0352: 1.

H0170: 1, S6024: 1,
S0134: 1, H0483: 1,
H0664: 1, H0449: 1,
H0458: 1, H0125: 1,
L0005: 1, S0045: 1,
S0132: 1, H0393: 1,
H0497: 1, H0485: 1,
H0486: 1, T0060: 1,
H0575: 1, H0122: 1,
H0036: 1, S0010: 1,
H0505: 1, S0049: 1,
H0196: 1, H0046: 1,
H0569: 1, H0123: 1,
L0471: 1, H0024: 1,
T0010: 1, H0266: 1,
S0312: 1, S0314: 1,
S0003: 1, S0214: 1,
H0622: 1, H0553: 1,
H0674: 1, S0364: 1,
S0036: 1, H0379: 1,
H0100: 1, L0370: 1,
T0042: 1, H0641: 1,
H0646: 1, S0144: 1,
S0426: 1, L0638: 1,
L0773: 1, L0775: 1,
L0378: 1, L0776: 1,
L0666: 1, L0438: 1,
H0547: 1, H0519: 1,
H0435: 1, H0539: 1,
H0518: 1, S0152: 1,

HAOTG75	HAOTG75R	1024	2 - 328	3199	Glu-1 to Gln-8, Pro-31 to Trp-36.	H0521: 1, H0631: 1, L0740: 1, L0759: 1, S0260: 1, H0445: 1, L0596: 1, L0581: 1, L0604: 1, L0594: 1, H0667: 1 and L0697: 1. L0747: 28, S0192: 21, L0659: 17, L0740: 12, L0757: 10, S0360: 9, H0545: 9, L0662: 9, L0775: 9, L0665: 9, L0439: 9, L0664: 8, S0358: 7, L0666: 7, L0750: 7, L0601: 7, L0777: 6, L0731: 6, L0471: 5, S0003: 5, H0038: 5, H0547: 5, S0206: 5, L0748: 5, L0756: 5, L0752: 5, L0758: 5, S0011: 5, S0026: 5, T0049: 4, L0717: 4, H0575: 4, H0012: 4, H0620: 4, H0083: 4, H0090: 4, L0770: 4, L0764: 4, L0794: 4, L0766: 4, L0804: 4, L0375: 4, L0806: 4, L0754: 4, L0779: 4, L0596: 4, L0588: 4, L0581: 4,

L0603: 4, H0556: 3, H0431: 3, H0370: 3, S0010: 3, H0596: 3, S0388: 3, T0023: 3, H0031: 3, H0264: 3, L0564: 3, S0372: 3, L0769: 3, L0667: 3, L0521: 3, L0768: 3, L0774: 3, L0657: 3, L0783: 3, L0809: 3, L0663: 3, S0126: 3, S0122: 3, H0682: 3, L0759: 3, L0591: 3, H0352: 3, L0353: 2, H0686: 2, S0040: 2, H0295: 2, H0650: 2, S0045: 2, S0046: 2, S0132: 2, H0549: 2, S0222: 2, H0427: 2, H0156: 2, H0263: 2, H0597: 2, H0546: 2, H0046: 2, H0050: 2, H0024: 2, T0010: 2, H0375: 2, H0266: 2, H0271: 2, H0030: 2, H0553: 2, H0644: 2, H0674: 2, H0135: 2, H0591: 2, H0616: 2, H0412: 2, H0413: 2, H0059: 2, H0100: 2,

S0002: 2, L0369: 2,
L0520: 2, L0763: 2,
L0637: 2, L0761: 2,
L0372: 2, L0767: 2,
L0649: 2, L0803: 2,
L0776: 2, L0382: 2,
L0565: 2, H0690: 2,
H0659: 2, H0670: 2,
H0660: 2, H0648: 2,
H0672: 2, S0404: 2,
S0406: 2, H0555: 2,
H0478: 2, H0626: 2,
H0627: 2, L0070: 2,
S3014: 2, S0032: 2,
L0741: 2, L0590: 2,
L0592: 2, L0599: 2,
L0593: 2, L0595: 2,
H0543: 2, L0600: 2,
H0170: 1, H0171: 1,
H0265: 1, T0002: 1,
H0140: 1, S0470: 1,
H0294: 1, L0785: 1,
S0212: 1, S0282: 1,
H0484: 1, H0671: 1,
H0663: 1, H0664: 1,
H0662: 1, H0638: 1,
L0005: 1, S0442: 1,
S0444: 1, H0676: 1,
H0208: 1, H0619: 1,
H0393: 1, S6022: 1,

H0369: 1, H0550: 1,
H0455: 1, H0587: 1,
H0333: 1, H0331: 1,
H0574: 1, H0559: 1,
T0039: 1, H0013: 1,
S0280: 1, H0097: 1,
H0042: 1, T0082: 1,
S0474: 1, H0581: 1,
S0049: 1, H0251: 1,
H0309: 1, H0235: 1,
H0011: 1, H0051: 1,
H0021: 1, H0510: 1,
H0594: 1, S0334: 1,
H0687: 1, S0250: 1,
S0214: 1, H0119: 1,
T0006: 1, H0628: 1,
H0617: 1, L0055: 1,
H0032: 1, H0169: 1,
H0124: 1, H0598: 1,
H0551: 1, T0067: 1,
H0128: 1, L0475: 1,
H0560: 1, H0561: 1,
S0352: 1, S0438: 1,
S0440: 1, H0132: 1,
H0641: 1, H0647: 1,
H0646: 1, S0344: 1,
S0426: 1, L0598: 1,
H0529: 1, L0762: 1,
L0646: 1, L0800: 1,
L0771: 1, L0773: 1,

HAOTH28	HAOTH28R	1025	33 - 164	3200	L0388: 1, L0650: 1, L0378: 1, L0805: 1, L0653: 1, L0527: 1, L0558: 1, L0636: 1, L0526: 1, L0647: 1, L0367: 1, L0787: 1, L0788: 1, H0144: 1, H0691: 1, H0520: 1, H0519: 1, H0365: 1, H0435: 1, H0658: 1, S0380: 1, H0521: 1, H0696: 1, S0044: 1, H0436: 1, S3012: 1, L0786: 1, L0780: 1, L0755: 1, S0260: 1, H0444: 1, H0343: 1, H0595: 1, S0436: 1, L0480: 1, L0605: 1, L0608: 1, L0362: 1, L0366: 1 and S0196: 1.
HAOTI07	HAOTI07R	1026	3 - 398	3201	Pro-1 to Arg-6, Met-12 to Ser-21.
HAOTT79	HAOTT79R	1027	3 - 392	3202	
HAOTU79	HAOTU79R	1028	15 - 455	3203	
HAOTW22	HAOTW22R	1029	1 - 201	3204	Ser-35 to Ser-41, Ile-50 to Gly-55.
HAOTW30	HAOTW30R	1030	376 - 564	3205	Arg-1 to Gly-7.
HAOTW65	HAOTW65R	1031	113 - 475	3206	H0686: 2 and S0358: 1.

HAPNK45	HAPNK45R	1032	68 - 232	3207		
HAPPR43	HAPPR43R	1033	200 - 313	3208	Lys-1 to Ser-6, Ala-26 to Thr-31.	
HAPQO14	HAPQO14R	1034	5 - 193	3209	Ser-1 to Pro-11.	
HAQML40	HAQML40R	1035	1 - 258	3210		
HASME85	HASME85R	1036	208 - 396	3211		
HAUAK54	HAUAK54R	1037	3 - 299	3212		
HAVMB46	HAVMB46R	1038	84 - 203	3213	Ser-13 to Arg-19, Ile-28 to Asn-33.	
HAVMW69	HAVMW69R	1039	3 - 116	3214		L0439: 2, L0755: 2, S0412: 2, H0170: 1, H0497: 1, H0591: 1, H0038: 1, L0641: 1, L0774: 1, L0651: 1, L0776: 1, L4501: 1, L0666: 1, L0663: 1, H0144: 1, L0438: 1, S0126: 1, H0659: 1, H0648: 1, L0602: 1, L0748: 1, L0749: 1, L0750: 1, L0756: 1, L0752: 1, L0759: 1, L0599: 1 and L0362: 1.
HAVNQ92	HAVNQ92R A	1040	1 - 165	3215	Ala-19 to Arg-24.	
HAVOJ11	HAVOJ11R	1041	108 - 239	3216	Gly-1 to Thr-12, Glu-23 to Lys-38.	
HAZAC68	HAZAC68R	1042	3 - 587	3217	Ser-119 to Lys-124.	
HAZAD13	HAZAD13R	1043	2 - 517	3218	Lys-32 to Arg-40,	

HAZAD40	HAZAD40R	1044	191 - 445	3219	Ser-54 to Gly-59, Glu-133 to Ala-147, Gln-153 to Gln-164. Val-9 to Gly-24.	S0360: 1, H0486: 1, L0761: 1, L0803: 1, L0774: 1, L0666: 1, L0663: 1, L0665: 1, H0520: 1, H0690: 1, H0435: 1 and L0747: 1.
HAZAE44	HAZAE44R	1045	3 - 512	3220		
HAZAG23	HAZAG23R	1046	2 - 466	3221	Gln-12 to Thr-20, Cys-39 to Asn-45, Thr-60 to Gly-66, Lys-99 to Asp-106, Asp-119 to Pro-127.	H0424: 16, S0380: 13, L0748: 13, L0750: 12, S0440: 10, S0444: 9, L0755: 9, L0758: 9, S0192: 9, H0484: 8, S0358: 8, H0545: 8, L0809: 8, L0747: 8, L0749: 8, S0360: 7, L0410: 7, S0406: 7, L0752: 7, L0766: 6, S0374: 6, L0751: 6, L0754: 6, H0423: 6, S0442: 5, H0672: 5, S0378: 5, S0404: 5, L0759: 5, H0556: 4, S0356: 4, S0376: 4, H0546: 4, H0150: 4, S0438: 4, L0775: 4, L0776: 4, L0518: 4, S0328: 4, L0740: 4,

S0434: 4, L0599: 4,
H0422: 4, H0685: 3,
S0116: 3, H0483: 3,
H0638: 3, H0486: 3,
H0318: 3, H0309: 3,
H0597: 3, H0617: 3,
H0494: 3, S0144: 3,
L0771: 3, L0767: 3,
L0768: 3, L0794: 3,
L0774: 3, L0806: 3,
L0783: 3, L0528: 3,
H0593: 3, S0126: 3,
H0690: 3, H0658: 3,
H0670: 3, S0330: 3,
H0696: 3, S0028: 3,
L0742: 3, L0439: 3,
L0731: 3, L0757: 3,
H0543: 3, H0149: 2,
S0218: 2, H0341: 2,
H0306: 2, H0402: 2,
S0420: 2, H0722: 2,
S0476: 2, H0392: 2,
H0333: 2, H0101: 2,
H0581: 2, H0421: 2,
H0204: 2, H0231: 2,
H0009: 2, H0023: 2,
H0024: 2, H0271: 2,
H0031: 2, H0644: 2,
H0166: 2, H0124: 2,
H0068: 2, H0616: 2,

H0059: 2, H0560: 2,
H0509: 2, S0344: 2,
S0422: 2, L0769: 2,
L0764: 2, L0765: 2,
L0651: 2, L0657: 2,
H0689: 2, H0684: 2,
H0659: 2, H0660: 2,
H0648: 2, H0521: 2,
S0044: 2, S0392: 2,
L0743: 2, S0436: 2,
L0588: 2, L0590: 2,
H0542: 2, S0446: 2,
L0600: 2, H0008: 2,
H0624: 1, H0170: 1,
H0171: 1, S0040: 1,
S6024: 1, H0295: 1,
H0294: 1, S0114: 1,
H0657: 1, H0656: 1,
L0760: 1, S0212: 1,
H0255: 1, H0663: 1,
S0418: 1, S0354: 1,
H0676: 1, S0408: 1,
T0008: 1, H0637: 1,
H0730: 1, H0393: 1,
S0278: 1, H0369: 1,
S0222: 1, H0370: 1,
H0330: 1, H0592: 1,
H0586: 1, H0574: 1,
L0622: 1, H0013: 1,
H0427: 1, S0280: 1,

H0156: 1, H0575: 1,
H0004: 1, H0274: 1,
H0253: 1, T0048: 1,
S0474: 1, H0085: 1,
H0596: 1, H0544: 1,
H0086: 1, H0123: 1,
L0471: 1, H0012: 1,
H0620: 1, H0057: 1,
T0010: 1, H0375: 1,
H0594: 1, H0179: 1,
H0188: 1, H0687: 1,
H0284: 1, H0252: 1,
T0023: 1, S0368: 1,
T0006: 1, H0604: 1,
H0213: 1, H0553: 1,
L0055: 1, H0032: 1,
H0673: 1, H0674: 1,
S0366: 1, S0036: 1,
H0163: 1, H0038: 1,
H0634: 1, H0087: 1,
T0067: 1, H0264: 1,
T0041: 1, H0625: 1,
H0561: 1, S0466: 1,
H0131: 1, S0150: 1,
H0633: 1, S0472: 1,
H0529: 1, L0762: 1,
L0763: 1, L0770: 1,
L3905: 1, L0761: 1,
L0772: 1, L0372: 1,
L0646: 1, L0374: 1,

HAZAG92	HAZAG92R	1047	282 - 467	3222	Pro-48 to Gly-59.	L0521: 1, L0662: 1, L0364: 1, L5564: 1, L0378: 1, L0655: 1, L0379: 1, L0656: 1, L0659: 1, L0540: 1, L0526: 1, L0384: 1, L0544: 1, L0541: 1, L0789: 1, L0793: 1, L0666: 1, L0664: 1, L0665: 1, H0726: 1, H0547: 1, H0683: 1, H0651: 1, H0539: 1, H0518: 1, S0350: 1, H0555: 1, H0576: 1, H0627: 1, S3014: 1, S0027: 1, S0032: 1, L0756: 1, L0786: 1, L0777: 1, L0753: 1, H0445: 1, L0591: 1, L0592: 1, L0608: 1 and L0603: 1.
HAZAH79	HAZAH79R	1048	138 - 515	3223	Gly-2 to Ser-9, Pro-46 to Cys-60, Pro-62 to His-69, Pro-81 to Thr-91, Ala-96 to Ser-101.	
HAZAI23	HAZAI23R	1049	1 - 165	3224	Lys-11 to Ser-16, Arg-20 to Glu-28.	L0747: 21, L0748: 18, L0750: 15, S0408: 11, L0771: 10, L0775: 9,

L0742: 8, S0410: 6, L0756: 6, L0752: 6, L0758: 6, L0731: 5, H0341: 4, L0766: 4, L0803: 4, L0776: 4, S0126: 4, H0170: 3, H0486: 3, S0346: 3, H0204: 3, H0545: 3, L0471: 3, S0440: 3, L0769: 3, L0772: 3, L0804: 3, H0214: 3, S0404: 3, L0744: 3, L0754: 3, L0757: 3, H0506: 3, H0171: 2, H0685: 2, S0420: 2, S0356: 2, S0358: 2, S0045: 2, H0587: 2, H0069: 2, L0021: 2, H0575: 2, T0048: 2, H0318: 2, H0581: 2, H0597: 2, H0009: 2, H0014: 2, H0510: 2, H0622: 2, H0031: 2, S0364: 2, H0591: 2, H0056: 2, H0494: 2, S0438: 2, L0770: 2, L0761: 2, L0521: 2, L0649: 2, L0650: 2, L0526: 2, L0792: 2, L0666: 2, L0665: 2,

H0690: 2, H0522: 2,
H0134: 2, L0743: 2,
L0740: 2, L0759: 2,
L0587: 2, H0422: 2,
H0624: 1, T0002: 1,
H0294: 1, H0657: 1,
H0484: 1, H0255: 1,
H0661: 1, H0664: 1,
H0176: 1, H0402: 1,
S0442: 1, S0376: 1,
H0637: 1, S0046: 1,
S0476: 1, H0393: 1,
L0717: 1, H0351: 1,
S0278: 1, S0222: 1,
H0392: 1, H0438: 1,
H0331: 1, L0622: 1,
H0635: 1, S0182: 1,
S0474: 1, H0173: 1,
H0052: 1, H0596: 1,
H0327: 1, H0546: 1,
H0150: 1, H0565: 1,
H0123: 1, H0081: 1,
H0051: 1, S0051: 1,
H0083: 1, H0594: 1,
H0028: 1, S0214: 1,
H0252: 1, H0428: 1,
H0213: 1, H0644: 1,
H0617: 1, H0163: 1,
H0090: 1, H0616: 1,
H0087: 1, H0488: 1,

HAZAI87	HAZAI87R	1050	264 - 428	3225	Phe-34 to Lys-41.	H0413: 1, T0069: 1, S0038: 1, T0041: 1, T0042: 1, H0512: 1, H0560: 1, H0646: 1, S0344: 1, S0422: 1, H0529: 1, L0520: 1, L0763: 1, L0646: 1, L0764: 1, L0773: 1, L0768: 1, L0522: 1, L0774: 1, L0784: 1, L0806: 1, L0805: 1, L0653: 1, L0655: 1, L0379: 1, L0807: 1, L0659: 1, L0517: 1, L0783: 1, L0519: 1, L0789: 1, L0791: 1, L0664: 1, S0053: 1, H0683: 1, H0659: 1, H0658: 1, S0328: 1, H0710: 1, H0696: 1, S0406: 1, L0751: 1, L0749: 1, L0786: 1, L0780: 1, L0753: 1, L0755: 1, S0260: 1, L0366: 1, H0653: 1, H0667: 1, H0542: 1, H0543: 1 and H0712: 1.	L0659: 6, L0662: 5, S0212: 4, S0003: 4, H0551: 4, S0192: 4,

S0376: 3, S0440: 3,
S0374: 3, H0521: 3,
S0040: 2, S0418: 2,
S0444: 2, H0580: 2,
H0486: 2, H0575: 2,
L0471: 2, H0024: 2,
H0553: 2, L0637: 2,
S0126: 2, S0406: 2,
S0028: 2, L0748: 2,
L0754: 2, L0757: 2,
S0434: 2, L0590: 2,
S0242: 2, H0686: 1,
H0685: 1, H0664: 1,
S0420: 1, L0005: 1,
S0360: 1, S0408: 1,
S0045: 1, S0476: 1,
S0278: 1, H0357: 1,
H0586: 1, T0039: 1,
H0635: 1, H0427: 1,
L0022: 1, H0004: 1,
H0505: 1, S0049: 1,
H0251: 1, H0263: 1,
T0003: 1, H0373: 1,
H0051: 1, H0356: 1,
H0622: 1, H0644: 1,
H0090: 1, H0412: 1,
H0623: 1, H0560: 1,
H0641: 1, H0633: 1,
S0142: 1, S0208: 1,
L0773: 1, L0521: 1,

HAZAI89	HAZAI89R	1051	3 - 260	3226	Ser-54 to Ser-60, Ile-69 to Gly-74.	L0649: 1, L0803: 1, L0775: 1, L0528: 1, L0663: 1, L0664: 1, H0144: 1, L0565: 1, H0693: 1, H0520: 1, H0547: 1, H0689: 1, H0690: 1, H0435: 1, H0659: 1, H0658: 1, H0670: 1, H0660: 1, S0152: 1, H0555: 1, H0436: 1, S0432: 1, S0390: 1, S3014: 1, L0439: 1, L0758: 1, L0686: 1, S0436: 1, L0588: 1, S0196: 1, L0698: 1 and H0293: 1.
HAZAJ72	HAZAJ72R	1052	1 - 612	3227	Ala-17 to Asp-36, Thr-56 to Met-61.	S0420: 2, H0575: 2, S0418: 1, L0005: 1, S0356: 1, H0619: 1, H0097: 1, H0581: 1, H0012: 1, H0373: 1, H0266: 1, S0250: 1, T0042: 1, H0625: 1, H0561: 1, S0438: 1, S0150: 1, H0641: 1, S0210: 1, H0693: 1, H0519: 1, H0690: 1, L0748: 1 and H0653: 1.

HAZAQ80	HAZAQ80R	1053	27 - 389	3228	Thr-41 to Lys-46, Thr-53 to Gly-59, Ala-77 to Asp-84.	
HAZAW22	HAZAW22R	1054	2 - 172	3229	Ser-1 to Leu-14, Glu-39 to Thr-47.	L0748: 31, L0747: 18, L0752: 17, L0758: 17, L0777: 15, L0766: 13, H0014: 9, L0776: 9, L0751: 9, L0740: 7, L0779: 7, L0754: 6, H0040: 5, L0769: 5, S0330: 5, L0439: 5, L0756: 5, L0599: 5, S0356: 4, H0587: 4, H0622: 4, L0783: 4, L0744: 4, L0745: 4, L0749: 4, L0755: 4, S0031: 4, H0624: 3, S0222: 3, H0156: 3, S0010: 3, S0049: 3, S0051: 3, S0003: 3, H0591: 3, H0038: 3, L0763: 3, L0770: 3, L0662: 3, L0551: 3, L0803: 3, L0664: 3, H0144: 3, H0547: 3, H0521: 3, L0757: 3, L0759: 3, L0596: 3, L0608: 3, L0595: 3, S0114: 2, S0116: 2, H0341: 2, S0418: 2,

S0360: 2, H0619: 2,
H0393: 2, H0013: 2,
H0575: 2, H0318: 2,
H0581: 2, H0051: 2,
S0388: 2, H0428: 2,
T0006: 2, H0673: 2,
H0169: 2, H0674: 2,
S0036: 2, H0616: 2,
H0551: 2, H0268: 2,
L0625: 2, L0768: 2,
L0649: 2, L0775: 2,
L0806: 2, L0805: 2,
H0539: 2, L0731: 2,
S0260: 2, H0445: 2,
S0434: 2, L0605: 2,
L0594: 2, H0543: 2,
H0170: 1, H0171: 1,
H0716: 1, S6024: 1,
S0134: 1, S0218: 1,
H0583: 1, H0650: 1,
H0657: 1, L0785: 1,
S0212: 1, S0282: 1,
S0035: 1, S0030: 1,
H0305: 1, H0638: 1,
S0348: 1, S0420: 1,
L0005: 1, S0442: 1,
H0340: 1, S0476: 1,
H0645: 1, S0300: 1,
H0411: 1, S0278: 1,
H0549: 1, H0431: 1,

H0409: 1, H0331: 1, H0574: 1, H0486: 1, S0346: 1, H0421: 1, H0052: 1, H0251: 1, L0032: 1, H0085: 1, H0545: 1, H0457: 1, L0041: 1, H0050: 1, H0024: 1, H0373: 1, S6028: 1, S0250: 1, H0615: 1, H0688: 1, H0039: 1, S0364: 1, H0361: 1, L0455: 1, H0376: 1, H0135: 1, H0090: 1, H0634: 1, T0004: 1, T0042: 1, S0014: 1, H0560: 1, H0625: 1, S0438: 1, H0509: 1, H0646: 1, H0529: 1, L0637: 1, L5575: 1, L0667: 1, L0646: 1, L0764: 1, L0771: 1, L5574: 1, L0774: 1, L0655: 1, L0527: 1, L0657: 1, L0659: 1, L0809: 1, L0789: 1, L0792: 1, L0793: 1, L0663: 1, L0665: 1, S0053: 1, H0520: 1, H0519: 1, S0126: 1, H0711: 1,

HAZBH84	HAZBH84R	1055	225 - 359	3230		
					H0690: 1, H0660: 1, S0136: 1, H0522: 1, S0406: 1, H0555: 1, S3012: 1, S0027: 1, S0028: 1, L0743: 1, L0750: 1, L0604: 1, L0361: 1, S0026: 1, H0653: 1, S0192: 1, S0196: 1, H0542: 1, H0423: 1, S0412: 1 and S0424: 1.	S0003: 154, S0214: 41, H0545: 38, L0651: 34, H0546: 17, L0747: 15, L0757: 14, L0731: 10, L0659: 7, L0776: 6, L0749: 6, H0544: 5, S0122: 5, H0365: 5, L0740: 5, S0360: 4, L0771: 4, L0662: 4, L0768: 4, H0150: 3, H0169: 3, L0750: 3, L0779: 3, H0661: 2, S0376: 2, H0163: 2, S0144: 2, L0764: 2, L0766: 2, L0649: 2, L0775: 2, L0653: 2, L0666: 2, S0126: 2, L0754: 2, L0759: 2, H0171: 1, H0419: 1,

HAZBI39	HAZBI39R	1056	56 - 424	3231		
				Ser-29 to Ile-39, Gly-42 to Trp-48, Lys-82 to Val-92.	H0411: 1, H0357: 1, H0486: 1, L0021: 1, H0309: 1, H0231: 1, L0738: 1, H0099: 1, H0364: 1, H0039: 1, S0366: 1, H0038: 1, S0142: 1, S0002: 1, L0762: 1, L0640: 1, L0763: 1, L0637: 1, L0646: 1, L0773: 1, L0523: 1, L0655: 1, L0379: 1, L0783: 1, L0663: 1, L0664: 1, L0565: 1, S0008: 1, H0690: 1, S0328: 1, H0696: 1, L0755: 1, L0758: 1, H0595: 1 and H0506: 1.	L0758: 3, H0068: 2, L0749: 2, L0756: 2, L0731: 2, S0026: 2, H0136: 2, S0040: 1, L0005: 1, H0351: 1, H0318: 1, H0052: 1, H0530: 1, H0266: 1, S0003: 1, H0412: 1, T0004: 1, T0042: 1, S0422: 1, H0529: 1, H0517: 1, L0762: 1, L0763: 1, L0770: 1,

HAZBJ69	HAZBJ69R	1057	3 - 323	3232	Gly-1 to Pro-6, Lys-58 to Asn-71.	L0769: 1, L0766: 1, L0775: 1, L0809: 1, H0698: 1, H0690: 1, S0390: 1, S0028: 1, L0742: 1, L0748: 1, L0747: 1, L0779: 1, L0752: 1, L0755: 1, L0759: 1, S0308: 1, H0542: 1, H0543: 1 and H0423: 1.
HBAGS73	HBAGS73R	1058	207 - 371	3233	Pro-15 to Thr-22, Lys-28 to Arg-35.	
HBBBE13	HBBBE13R	1059	2 - 199	3234		
HBCPI58	HBCPI58RA	1060	3 - 245	3235		
HBJAC26	HBJAC26R	1061	267 - 446	3236		L0665: 3, H0318: 2, L0659: 2, S0330: 2, L0439: 2, L0599: 2, H0583: 1, H0038: 1, L0761: 1, L0771: 1, L0387: 1, L0655: 1, L0666: 1, L0779: 1, L0777: 1, L0758: 1 and L0608: 1.
HBJFS85	HBJFS85R	1062	94 - 261	3237	Asn-30 to Ile-35.	
HBJHY72	HBJHY72RP00B	1063	1 - 297	3238	Gly-1 to Pro-38, Leu-45 to Gly-64.	AR052: 12, AR055: 8, AR053: 8, AR033: 6, AR089: 6, AR061: 6, AR060: 5, AR096: 3,

AR104: 1, AR039: 0
L0794: 5, L0766: 3,
L0759: 3, S0212: 2,
H0318: 2, L0803: 2,
L0804: 2, L0378: 2,
L0665: 2, L0438: 2,
L0439: 2, L0749: 2,
L0591: 2, L0599: 2,
L0362: 2, H0686: 1,
S0342: 1, S0134: 1,
H0656: 1, H0669: 1,
S0358: 1, H0370: 1,
H0069: 1, S0346: 1,
H0251: 1, H0050: 1,
H0373: 1, H0266: 1,
S0022: 1, L0483: 1,
H0553: 1, H0163: 1,
H0090: 1, H0116: 1,
H0509: 1, S0426: 1,
H0529: 1, L0769: 1,
L0638: 1, L0646: 1,
L0648: 1, L0768: 1,
L0381: 1, L0375: 1,
L0653: 1, L0659: 1,
L0782: 1, L0809: 1,
L0793: 1, H0691: 1,
H0435: 1, H0659: 1,
H0648: 1, S0152: 1,
S0390: 1, S0027: 1,
S0028: 1, L0777: 1,

HBJMN13	HBJMN13R	1064	145 - 231	3239	Glu-8 to Asn-13, Arg-16 to Thr-29.	L0731: 1, S0260: 1, L0596: 1, S0192: 1 and S0424: 1.
HBXCG52	HBXCG52R	1065	59 - 547	3240	Lys-23 to Lys-32, Ser-72 to Leu-80, Ser-90 to Gly-95, Leu-98 to His-103, Ser-106 to Gly-113, Ile-121 to Phe-128.	S0280: 1 and S0038: 1.
HBXFO08	HBXFO08R	1066	1 - 126	3241	Leu-2 to Val-10.	
HCACS53	HCACS53RP 00A	1067	145 - 543	3242	His-2 to Glu-28, Ala-37 to Gly-45, His-54 to Pro-62, Glu-69 to Thr-77.	
HCHAJ85	HCHAJ85R	1068	171 - 359	3243	Arg-1 to Arg-6, Phe-27 to Arg-32.	
HCHMM71	HCHMM71R	1069	2 - 322	3244		H0651: 9, L0601: 5, H0559: 4, H0494: 4, L0646: 3, H0484: 2, H0255: 2, S0358: 2, H0550: 2, H0309: 2, H0014: 2, H0188: 2, H0617: 2, H0646: 2, L0769: 2, L0644: 2, L0806: 2, H0689: 2, L0750: 2, L0603: 2, H0624: 1, H0171: 1, H0657: 1, H0663: 1,

HCHMW20	HCHMW20R	1070	53 - 319	3245	Ser-1 to Thr-8, Glu-17 to Ala-32, Arg-39 to Trp-47.	S0360: 1, H0574: 1, H0257: 1, H0013: 1, H0635: 1, H0098: 1, H0253: 1, H0327: 1, H0545: 1, H0024: 1, H0181: 1, H0359: 1, S0150: 1, L0369: 1, L0771: 1, L0662: 1, L0766: 1, L0803: 1, L0661: 1, S0428: 1, H0670: 1, S0328: 1, L0748: 1, L0439: 1, L0758: 1 and H0543: 1.
HCLBH21	HCLBH21R	1071	3 - 134	3246		
HCNDT49	HCNDT49R	1072	234 - 443	3247	Gln-17 to Pro-27.	L0439: 8, H0052: 7, L0748: 7, S0440: 5, L0758: 5, H0046: 4, H0038: 4, L0769: 4, S0442: 3, H0013: 3, H0253: 3, T0010: 3, L0774: 3, L0776: 3, H0144: 3, H0521: 3, S0404: 3, L0752: 3, L0731: 3, H0656: 2, S0358: 2, S0360: 2, S0222: 2, H0618: 2, H0620: 2, L0351: 2,

S0422: 2, L0764: 2,
L0771: 2, L0783: 2,
L0793: 2, H0658: 2,
H0666: 2, L0751: 2,
L0754: 2, L0745: 2,
L0747: 2, L0750: 2,
H0624: 1, H0265: 1,
H0556: 1, H0686: 1,
S0134: 1, S0212: 1,
S0001: 1, H0254: 1,
H0661: 1, S0354: 1,
S0444: 1, S0408: 1,
S0300: 1, S0278: 1,
H0369: 1, H0370: 1,
H0333: 1, H0574: 1,
H0486: 1, H0036: 1,
H0263: 1, H0597: 1,
H0545: 1, H0572: 1,
H0024: 1, S0388: 1,
S0051: 1, S0250: 1,
H0252: 1, H0428: 1,
H0039: 1, H0644: 1,
L0055: 1, H0674: 1,
H0135: 1, H0087: 1,
T0067: 1, H0488: 1,
H0529: 1, L0763: 1,
L0770: 1, L0761: 1,
L0374: 1, L0662: 1,
L0768: 1, L0766: 1,
L0803: 1, L0775: 1,

HCOMA72	HCOMA72R	1073	25 - 273	3248	Arg-1 to Leu-10, Ser-32 to Ala-45, Ala-58 to Gly-68.	L0805: 1, L0653: 1, L0526: 1, L5622: 1, L0666: 1, L0664: 1, L0665: 1, S0053: 1, H0547: 1, H0682: 1, H0435: 1, H0670: 1, H0660: 1, H0648: 1, H0672: 1, S0328: 1, H0539: 1, S0152: 1, H0696: 1, S0044: 1, S0406: 1, H0631: 1, S3014: 1, S0028: 1, L0742: 1, L0749: 1, L0759: 1, S0436: 1, S0011: 1, S0192: 1, H0542: 1, H0423: 1, S0398: 1 and H0506: 1.
HCOMB04	HCOMB04R	1074	32 - 754	3249	Tyr-3 to Gly-10, Glu-19 to Trp-25.	L0747: 15, L0750: 7, L0731: 7, L0588: 6, L0748: 5, L0439: 5, L0759: 5, H0150: 3, S0144: 3, L0666: 3, L0665: 3, L0752: 3, L0758: 3, L0591: 3, S6024: 2, T0049: 2, S0356: 2, H0674: 2, H0413: 2, S0142: 2,

L0770: 2, L0769: 2, L0774: 2, L0775: 2, L0657: 2, H0672: 2, S0328: 2, S0378: 2, L0605: 2, L0593: 2, H0624: 1, T0002: 1, H0638: 1, S0418: 1, L0005: 1, S0376: 1, S0444: 1, S0360: 1, H0675: 1, S0045: 1, H0393: 1, S0222: 1, H0441: 1, H0453: 1, H0333: 1, H0574: 1, H0486: 1, H0101: 1, L0021: 1, H0098: 1, T0010: 1, H0083: 1, H0266: 1, H0188: 1, S0003: 1, H0328: 1, H0615: 1, H0428: 1, T0006: 1, H0166: 1, H0598: 1, H0090: 1, H0063: 1, T0069: 1, H0509: 1, H0641: 1, S0002: 1, L0369: 1, L0372: 1, L0662: 1, L0794: 1, L0766: 1, L0803: 1, L0651: 1, L0655: 1, L0379: 1, L0656: 1, L0659: 1, L0782: 1, L0783: 1,

HCOMD38	HCOMD38R	1075	3 - 275	3250		L0788: 1, L0664: 1, L0565: 1, L0438: 1, H0547: 1, S0126: 1, H0435: 1, H0659: 1, H0658: 1, H0670: 1, H0522: 1, H0696: 1, L0740: 1, L0751: 1, L0745: 1, L0755: 1, L0757: 1, H0445: 1, H0343: 1, H0595: 1, L0596: 1, L0581: 1, L0599: 1 and S0192: 1.
HCOMD61	HCOMD61R	1076	1 - 315	3251	Pro-1 to Pro-9, Ile-43 to Lys-48.	
HCOMF10	HCOMF10R	1077	350 - 622	3252	Asn-10 to Val-16.	L0740: 6, L0666: 2, H0547: 2, L0751: 2, L0777: 2, H0483: 1, S0358: 1, S0444: 1, H0038: 1, L0770: 1, L0768: 1, L0774: 1, L0805: 1, L0658: 1, L0789: 1, H0520: 1, H0659: 1, H0670: 1, L0747: 1, L0779: 1 and L0758: 1.
HCOMF52	HCOMF52R	1078	2 - 523	3253	Lys-11 to Thr-16, Arg-18 to Glu-24, Arg-31 to Leu-38, Phe-51 to Glu-56,	L0439: 7, L0748: 5, H0255: 4, H0253: 4, H0012: 3, H0620: 3, H0617: 3, L0783: 3,

Glu-59 to Glu-67, Thr-102 to Thr-114, Leu-119 to Gln-124.	L0438: 3, H0618: 2, H0046: 2, L0769: 2, L0766: 2, L0532: 2, L0663: 2, H0521: 2, L0750: 2, L0777: 2, L0592: 2, H0543: 2, H0650: 1, S0212: 1, S0001: 1, H0483: 1, H0254: 1, H0638: 1, S0418: 1, S0358: 1, H0580: 1, S0468: 1, H0549: 1, H0559: 1, H0013: 1, S0280: 1, H0318: 1, H0052: 1, H0024: 1, H0252: 1, H0424: 1, H0553: 1, H0644: 1, H0124: 1, H0376: 1, H0135: 1, H0040: 1, H0087: 1, H0488: 1, T0042: 1, H0494: 1, H0509: 1, L0768: 1, L0388: 1, L0657: 1, L0659: 1, L0789: 1, L0352: 1, S0126: 1, H0689: 1, H0658: 1, H0670: 1, H0436: 1, H0478: 1, H0626: 1, L0742: 1, L0780: 1, L0731: 1, H0445: 1, L0608: 1,

					L0366: 1 and S0276: 1.
HCOMG28	HCOMG28R	1079	46 - 357	3254	Lys-1 to Arg-8, Asp-20 to Thr-26, Gly-35 to Glu-48, Leu-66 to Arg-72, Phe-83 to Tyr-88.
HCOMG40	HCOMG40R	1080	29 - 373	3255	Trp-13 to Asp-19, Cys-29 to Gln-34, Ala-41 to Arg-52, Gly-54 to Gln-59, Arg-69 to Tyr-83.
HCOMG82	HCOMG82R	1081	233 - 436	3256	
HCOMH70	HCOMH70R	1082	21 - 167	3257	Pro-13 to Pro-22. H0670: 14, S0360: 9, L0657: 5, L0659: 4, L0809: 4, H0696: 4, L0777: 4, S0356: 3, L0764: 3, L0662: 3, S0374: 3, H0637: 2, H0411: 2, H0486: 2, L0762: 2, L0763: 2, L0521: 2, L0768: 2, L0774: 2, L0805: 2, L0666: 2, L0665: 2, H0659: 2, H0672: 2, H0710: 2, S0406: 2, L0744: 2, L0748: 2, H0686: 1, S0040: 1, H0713: 1, H0657: 1, H0662: 1, S0444: 1, S0408: 1, S0410: 1,

HCOMI30	HCOMI30R	1083	42 - 497	3258	H0602: 1, H0643: 1, T0048: 1, H0263: 1, H0596: 1, H0014: 1, H0015: 1, H0594: 1, H0271: 1, H0687: 1, S0003: 1, S0214: 1, H0169: 1, H0674: 1, S0450: 1, H0649: 1, L0640: 1, L0646: 1, L0641: 1, L0773: 1, L0648: 1, L0388: 1, L0784: 1, L0806: 1, L0776: 1, L0655: 1, L0519: 1, L0530: 1, H0547: 1, H0689: 1, H0435: 1, H0648: 1, S0328: 1, S0330: 1, H0555: 1, H0627: 1, S0390: 1, S0028: 1, L0751: 1, L0779: 1, L0731: 1, S0434: 1, L0581: 1, L0362: 1 and H0667: 1.
HCOMI37	HCOMI37R	1084	244 - 618	3259	
HCOML11	HCOML11R	1085	255 - 605	3260	Lys-1 to Gly-10, Pro-13 to Asn-23.
HCOMM12	HCOMM12R	1086	138 - 338	3261	L0743: 19, L0731: 13, L0744: 12, L0748: 11, L0666: 9, L0751: 9,

L0664: 8, H0144: 8,
H0333: 7, H0617: 7,
L0769: 7, L0662: 7,
S0022: 6, H0616: 6,
H0087: 6, L0483: 5,
H0181: 5, L0517: 5,
L0519: 5, L0754: 5,
H0677: 5, S0051: 4,
S0344: 4, L0663: 4,
H0658: 4, L0747: 4,
L0750: 4, L0757: 4,
H0295: 3, T0049: 3,
H0255: 3, L0622: 3,
T0039: 3, H0253: 3,
H0545: 3, L0163: 3,
H0594: 3, H0188: 3,
H0673: 3, H0100: 3,
S0142: 3, L0372: 3,
L0775: 3, L0776: 3,
L0657: 3, L0382: 3,
L0665: 3, H0672: 3,
S0027: 3, L0742: 3,
L0752: 3, S0260: 3,
H0445: 3, L0596: 3,
L0588: 3, L0599: 3,
S0420: 2, H0637: 2,
S0045: 2, S0132: 2,
S0300: 2, S0278: 2,
S0222: 2, H0431: 2,
H0392: 2, H0599: 2,

H0575: 2, H0052: 2,
H0309: 2, H0085: 2,
H0597: 2, H0544: 2,
H0428: 2, H0124: 2,
S0036: 2, H0163: 2,
H0038: 2, H0413: 2,
H0529: 2, L0369: 2,
L0763: 2, L0770: 2,
L0638: 2, L0764: 2,
L0771: 2, L0803: 2,
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L0655: 2, L0384: 2,
L0809: 2, L0532: 2,
S0374: 2, S0126: 2,
H0670: 2, H0651: 2,
H0521: 2, S0028: 2,
L0740: 2, L0485: 2,
L0362: 2, L0601: 2,
S0192: 2, S0424: 2,
L0600: 2, H0556: 1,
T0002: 1, H0686: 1,
S0040: 1, S0342: 1,
H0294: 1, S0114: 1,
S0134: 1, H0650: 1,
H0657: 1, L0785: 1,
H0341: 1, S0180: 1,
S0212: 1, H0484: 1,
H0483: 1, H0254: 1,
H0671: 1, H0662: 1,
H0402: 1, H0638: 1,

S0418: 1, S0356: 1,
T0007: 1, S0358: 1,
S0007: 1, H0208: 1,
H0441: 1, H0438: 1,
H0587: 1, S0005: 1,
L0623: 1, L0477: 1,
T0114: 1, S0280: 1,
L0021: 1, H0590: 1,
H0004: 1, H0618: 1,
S0010: 1, H0318: 1,
S0049: 1, H0251: 1,
H0596: 1, T0110: 1,
H0327: 1, H0009: 1,
H0123: 1, L0471: 1,
H0006: 1, H0014: 1,
H0051: 1, S0388: 1,
H0510: 1, S0334: 1,
H0687: 1, T0023: 1,
T0006: 1, H0424: 1,
H0182: 1, H0606: 1,
H0383: 1, H0165: 1,
H0166: 1, S0366: 1,
H0135: 1, H0090: 1,
T0067: 1, H0488: 1,
H0412: 1, T0069: 1,
S0112: 1, L0564: 1,
H0494: 1, S0015: 1,
H0561: 1, L0762: 1,
L0640: 1, L0637: 1,
L0761: 1, L0667: 1,

L0772: 1, L0373: 1,
L0646: 1, L0643: 1,
L0374: 1, L0765: 1,
L0773: 1, L0648: 1,
L0521: 1, L0768: 1,
L0364: 1, L0533: 1,
L0650: 1, L0774: 1,
L0376: 1, L0806: 1,
L0652: 1, L0653: 1,
L0606: 1, L0629: 1,
L0659: 1, L0636: 1,
L0542: 1, L0526: 1,
L0518: 1, L0782: 1,
L0783: 1, H0689: 1,
H0690: 1, H0682: 1,
H0683: 1, H0659: 1,
H0660: 1, S0328: 1,
S0330: 1, S0380: 1,
H0522: 1, S0004: 1,
H0555: 1, L0611: 1,
S3014: 1, S0206: 1,
L0755: 1, L0758: 1,
H0444: 1, L0587: 1,
L0589: 1, L0605: 1,
L0591: 1, L0608: 1,
L0361: 1, L0366: 1,
H0665: 1, S0242: 1,
S0194: 1, H0543: 1,
H0423: 1, S0460: 1,
S0456: 1 and H0506: 1.

HCOMM55	HCOMM55R	1087	298 - 119	3262	Pro-10 to Leu-20, His-27 to Lys-40.
HCOMO58	HCOMO58R	1088	1 - 336	3263	Phe-7 to Asp-29, Glu-31 to Lys-38, Thr-46 to Thr-52, Glu-65 to Arg-72.
HCOMW52	HCOMW52RP00B	1089	3 - 443	3264	
HCOMX77	HCOMX77R	1090	166 - 492	3265	
HCONC18	HCONC18RP00B	1091	3 - 161	3266	
HCONH28	HCONH28R	1092	76 - 267	3267	L0754: 3, H0624: 2, S0354: 2, H0124: 2, L0766: 2, L0751: 2, L0759: 2, S0116: 1, H0661: 1, H0098: 1, H0597: 1, L0157: 1, S0250: 1, S0003: 1, H0622: 1, H0553: 1, H0509: 1, L0521: 1, L0662: 1, L0768: 1, L0803: 1, L0657: 1, L0659: 1, L0666: 1, L0663: 1, H0144: 1, S0126: 1, H0670: 1, L0779: 1, L0777: 1, L0755: 1, L0589: 1 and L0362: 1.
HCONK56	HCONK56R	1093	8 - 718	3268	
HCONK75	HCONK75R	1094	33 - 398	3269	

HCONL49	HCONL49R	1095	3 - 221	3270	His-23 to Lys-34, Arg-49 to Leu-57, Pro-59 to Ser-66.	L0748: 50, L0754: 42, L0731: 31, H0644: 30, L0747: 29, H0551: 22, S0418: 21, L0659: 17, H0619: 15, L0663: 14, L0666: 13, S0360: 10, H0622: 10, H0031: 10, H0553: 10, L0662: 10, S0126: 10, L0757: 10, L0603: 10, S0420: 8, H0486: 8, H0013: 8, H0050: 8, H0623: 8, L0717: 7, H0144: 7, L0770: 6, L0750: 6, H0427: 5, H0024: 5, H0328: 5, H0030: 5, L0773: 5, L0665: 5, L0749: 5, H0713: 4, T0039: 4, S0280: 4, H0012: 4, H0038: 4, L0794: 4, L0774: 4, L0775: 4, L0805: 4, H0624: 3, H0170: 3, H0171: 3, S0356: 3, H0329: 3, S0046: 3, H0331: 3, H0575: 3, L0471: 3, H0620: 3,
HCONL59	HCONL59R	1096	255 - 455	3271		

S0250: 3, H0032: 3,
H0591: 3, L0598: 3,
L0803: 3, L0653: 3,
L0657: 3, H0670: 3,
S0406: 3, H0555: 3,
L0780: 3, L0605: 3,
H0667: 3, H0717: 2,
T0049: 2, S0212: 2,
H0661: 2, S0376: 2,
S0007: 2, H0208: 2,
S0476: 2, H0645: 2,
H0411: 2, H0437: 2,
H0550: 2, H0586: 2,
H0333: 2, H0599: 2,
H0042: 2, H0545: 2,
H0123: 2, H0105: 2,
H0014: 2, H0051: 2,
H0375: 2, L0142: 2,
H0598: 2, H0135: 2,
H0040: 2, S0372: 2,
L0520: 2, L0640: 2,
L0769: 2, L5566: 2,
L0772: 2, L0646: 2,
L0771: 2, L0363: 2,
L0768: 2, L0375: 2,
L0654: 2, L0776: 2,
L0809: 2, L0438: 2,
H0547: 2, H0519: 2,
L0602: 2, L0743: 2,
L0744: 2, L0439: 2,

L0758: 2, L0759: 2,
L0588: 2, L0599: 2,
L0361: 2, H0716: 1,
H0294: 1, S0430: 1,
S0298: 1, S0132: 1,
H0351: 1, H0369: 1,
S0222: 1, H0370: 1,
H0392: 1, H0409: 1,
H0587: 1, H0574: 1,
H0485: 1, T0040: 1,
T0060: 1, H0244: 1,
L0021: 1, H0003: 1,
H0036: 1, H0274: 1,
H0253: 1, H0505: 1,
H0251: 1, H0544: 1,
H0546: 1, H0046: 1,
H0081: 1, H0019: 1,
T0003: 1, H0057: 1,
H0015: 1, H0373: 1,
H0275: 1, H0594: 1,
S0003: 1, H0039: 1,
H0111: 1, H0674: 1,
S0364: 1, S0036: 1,
H0090: 1, H0063: 1,
H0087: 1, H0268: 1,
H0412: 1, H0059: 1,
H0100: 1, L0564: 1,
H0561: 1, S0210: 1,
L0369: 1, L3904: 1,
L0800: 1, L0641: 1,

| HCONL67 | HCONL67R | 1097 | 389 - 631 | 3272 | Leu-2 to Leu-9. | L0764: 1, L5564: 1, L0804: 1, L0378: 1, L0806: 1, L0807: 1, L0526: 1, L0787: 1, L0788: 1, L0791: 1, L0793: 1, S0374: 1, H0691: 1, T0068: 1, H0690: 1, H0682: 1, H0684: 1, H0658: 1, H0672: 1, H0651: 1, H0518: 1, H0696: 1, S0146: 1, S0037: 1, S3014: 1, S0027: 1, S0028: 1, S0206: 1, S0032: 1, H0445: 1, L0589: 1, L0590: 1, L0485: 1, L0604: 1, H0668: 1, H0653: 1, S0242: 1, S0194: 1 and H0008: 1. L0748: 50, L0754: 42, L0731: 31, H0644: 30, L0747: 29, H0551: 22, S0418: 21, L0659: 17, H0619: 15, L0663: 14, L0666: 13, S0360: 10, H0622: 10, H0031: 10, H0553: 10, L0662: 10, S0126: 10, L0757: 10, L0603: 10, S0420: 8, |

H0486: 8, H0013: 8, H0050: 8, H0623: 8, L0717: 7, H0144: 7, L0770: 6, L0750: 6, H0427: 5, H0024: 5, H0328: 5, H0030: 5, L0773: 5, L0665: 5, L0749: 5, H0713: 4, T0039: 4, S0280: 4, H0012: 4, H0038: 4, L0794: 4, L0774: 4, L0775: 4, L0805: 4, H0624: 3, H0170: 3, H0171: 3, S0356: 3, H0329: 3, S0046: 3, H0331: 3, H0575: 3, L0471: 3, H0620: 3, S0250: 3, H0032: 3, H0591: 3, L0598: 3, L0803: 3, L0653: 3, L0657: 3, H0670: 3, S0406: 3, H0555: 3, L0780: 3, L0605: 3, H0667: 3, H0717: 2, T0049: 2, S0212: 2, H0661: 2, S0376: 2, S0007: 2, H0208: 2, S0476: 2, H0645: 2, H0411: 2, H0437: 2, H0550: 2, H0586: 2,

H0333: 2, H0599: 2, H0042: 2, H0545: 2, H0123: 2, H0105: 2, H0014: 2, H0051: 2, H0375: 2, L0142: 2, H0598: 2, H0135: 2, H0040: 2, S0372: 2, L0520: 2, L0640: 2, L0769: 2, L5566: 2, L0772: 2, L0646: 2, L0771: 2, L0363: 2, L0768: 2, L0375: 2, L0654: 2, L0776: 2, L0809: 2, L0438: 2, H0547: 2, H0519: 2, L0602: 2, L0743: 2, L0744: 2, L0439: 2, L0758: 2, L0759: 2, L0588: 2, L0599: 2, L0361: 2, H0716: 1, H0294: 1, S0430: 1, S0298: 1, S0132: 1, H0351: 1, H0369: 1, S0222: 1, H0370: 1, H0392: 1, H0409: 1, H0587: 1, H0574: 1, H0485: 1, T0040: 1, T0060: 1, H0244: 1, L0021: 1, H0003: 1, H0036: 1, H0274: 1,

H0253: 1, H0505: 1,
H0251: 1, H0544: 1,
H0546: 1, H0046: 1,
H0081: 1, H0019: 1,
T0003: 1, H0057: 1,
H0015: 1, H0373: 1,
H0275: 1, H0594: 1,
S0003: 1, H0039: 1,
H0111: 1, H0674: 1,
S0364: 1, S0036: 1,
H0090: 1, H0063: 1,
H0087: 1, H0268: 1,
H0412: 1, H0059: 1,
H0100: 1, L0564: 1,
H0561: 1, S0210: 1,
L0369: 1, L3904: 1,
L0800: 1, L0641: 1,
L0764: 1, L5564: 1,
L0804: 1, L0378: 1,
L0806: 1, L0807: 1,
L0526: 1, L0787: 1,
L0788: 1, L0791: 1,
L0793: 1, S0374: 1,
H0691: 1, T0068: 1,
H0690: 1, H0682: 1,
H0684: 1, H0658: 1,
H0672: 1, H0651: 1,
H0518: 1, H0696: 1,
S0146: 1, S0037: 1,
S3014: 1, S0027: 1,

HCONN92	HCONN92R	1098	205 - 384	3273	S0028: 1, S0206: 1, S0032: 1, H0445: 1, L0589: 1, L0590: 1, L0485: 1, L0604: 1, H0668: 1, H0653: 1, S0242: 1, S0194: 1 and H0008: 1.
HCONO17	HCONO17R	1099	1 - 135	3274	
HCONO25	HCONO25R	1100	218 - 610	3275	L0803: 15, L0766: 7, L0748: 6, L0809: 5, L0749: 5, L0804: 4, L0776: 4, L0754: 4, L0752: 4, L0805: 3, L0755: 3, S0438: 2, L0800: 2, L0662: 2, L0740: 2, L0751: 2, L0747: 2, L0750: 2, L0757: 2, L0615: 1, H0556: 1, S0278: 1, T0039: 1, H0318: 1, H0597: 1, H0009: 1, H0510: 1, H0553: 1, H0063: 1, H0509: 1, H0647: 1, S0144: 1, L0763: 1, L0770: 1, L0764: 1, L0768: 1, L0794: 1, L0775: 1, L0653: 1, L0661: 1, L0518: 1, L0790: 1,

HCONP44	HCONP44R	1101	3 - 413	3276	Val-1 to Ile-10, Met-32 to Asn-42.		H0519: 1, H0659: 1, H0670: 1, S0328: 1, H0696: 1, L0439: 1, L0581: 1, S0242: 1 and S0276: 1.
HCONQ67	HCONQ67R	1102	1 - 669	3277	Gly-7 to Gly-21, Pro-145 to Arg-152, Ala-178 to Lys-183.		
HCONQ71	HCONQ71R	1103	312 - 488	3278			
HCONR31	HCONR31R	1104	3 - 380	3279	Gly-18 to Gln-39, Leu-49 to His-60, Glu-67 to Asp-92.		
HCONU03	HCONU03R	1105	3 - 575	3280			
HCONW62	HCONW62R	1106	1 - 429	3281	Thr-76 to Arg-92, Pro-113 to Ala-118.		
HCONW74	HCONW74R	1107	85 - 234	3282	Pro-15 to Tyr-21.		
HCONW90	HCONW90R	1108	2 - 151	3283	Asn-1 to Pro-10.		
HCONW95	HCONW95R	1109	44 - 457	3284			
HCOOB60	HCOOB60R	1110	101 - 352	3285			
HCOOG32	HCOOG32R	1111	2 - 334	3286			
HCOOG37	HCOOG37R	1112	3 - 482	3287			
HCOOH93	HCOOH93R	1113	1 - 426	3288			
HCOOI71	HCOOI71R	1114	1 - 354	3289	Ala-15 to Gln-25, Gly-42 to Asp-51, Gln-82 to Lys-87, Lys-113 to Lys-118.		
HCOOI79	HCOOI79R	1115	209 - 625	3290			

HCOOM18	HCOOM18R	1116	2 - 694	3291	Lys-71 to Glu-76, Ala-95 to Asp-100, Asp-113 to Ser-134.	
HCOOM73	HCOOM73R	1117	2 - 661	3292	Leu-33 to Lys-39.	H0012: 5, H0620: 4, H0622: 4, L0803: 4, H0670: 4, L0751: 4, L0770: 3, S6024: 2, S0222: 2, L0791: 2, L0731: 2, H0549: 1, H0438: 1, T0023: 1, H0477: 1, H0647: 1, L0648: 1, L0774: 1, L0659: 1, L0664: 1, L0665: 1, H0659: 1, H0658: 1, H0648: 1, H0651: 1, S0380: 1, L0748: 1, L0439: 1, L0756: 1, L0779: 1 and L0755: 1.
HCOOQ46	HCOOQ46R	1118	2 - 166	3293		
HCOOS39	HCOOS39R	1119	2 - 229	3294		
HCOOT43	HCOOT43R	1120	2 - 439	3295		L0743: 19, L0731: 13, L0744: 12, L0748: 11, L0666: 9, L0751: 9, L0664: 8, H0144: 8, H0333: 7, H0617: 7, L0769: 7, L0662: 7, S0022: 6, H0616: 6, H0087: 6, L0483: 5, H0181: 5, L0517: 5,

L0519: 5, L0754: 5,
H0677: 5, S0051: 4,
S0344: 4, L0663: 4,
H0658: 4, L0747: 4,
L0750: 4, L0757: 4,
H0295: 3, T0049: 3,
H0255: 3, L0622: 3,
T0039: 3, H0253: 3,
H0545: 3, L0163: 3,
H0594: 3, H0188: 3,
H0673: 3, H0100: 3,
S0142: 3, L0372: 3,
L0775: 3, L0776: 3,
L0657: 3, L0382: 3,
L0665: 3, H0672: 3,
S0027: 3, L0742: 3,
L0752: 3, S0260: 3,
H0445: 3, L0596: 3,
L0588: 3, L0599: 3,
S0420: 2, H0637: 2,
S0045: 2, S0132: 2,
S0300: 2, S0278: 2,
S0222: 2, H0431: 2,
H0392: 2, H0599: 2,
H0575: 2, H0052: 2,
H0309: 2, H0085: 2,
H0597: 2, H0544: 2,
H0428: 2, H0124: 2,
S0036: 2, H0163: 2,
H0038: 2, H0413: 2,

H0529: 2, L0369: 2, L0763: 2, L0770: 2, L0638: 2, L0764: 2, L0771: 2, L0803: 2, L0804: 2, L0375: 2, L0655: 2, L0384: 2, L0809: 2, L0532: 2, S0374: 2, S0126: 2, H0670: 2, H0651: 2, H0521: 2, S0028: 2, L0740: 2, L0485: 2, L0362: 2, L0601: 2, S0192: 2, S0424: 2, L0600: 2, H0556: 1, T0002: 1, H0686: 1, S0040: 1, S0342: 1, H0294: 1, S0114: 1, S0134: 1, H0650: 1, H0657: 1, L0785: 1, H0341: 1, S0180: 1, S0212: 1, H0484: 1, H0483: 1, H0254: 1, H0671: 1, H0662: 1, H0402: 1, H0638: 1, S0418: 1, S0356: 1, T0007: 1, S0358: 1, S0007: 1, H0208: 1, H0441: 1, H0438: 1, H0587: 1, S0005: 1, L0623: 1, L0477: 1,

T0114: 1, S0280: 1, L0021: 1, H0590: 1, H0004: 1, H0618: 1, S0010: 1, H0318: 1, S0049: 1, H0251: 1, H0596: 1, T0110: 1, H0327: 1, H0009: 1, H0123: 1, L0471: 1, H0006: 1, H0014: 1, H0051: 1, S0388: 1, H0510: 1, S0334: 1, H0687: 1, T0023: 1, T0006: 1, H0424: 1, H0182: 1, H0606: 1, H0383: 1, H0165: 1, H0166: 1, S0366: 1, H0135: 1, H0090: 1, T0067: 1, H0488: 1, H0412: 1, T0069: 1, S0112: 1, L0564: 1, H0494: 1, S0015: 1, H0561: 1, L0762: 1, L0640: 1, L0637: 1, L0761: 1, L0667: 1, L0772: 1, L0373: 1, L0646: 1, L0643: 1, L0374: 1, L0765: 1, L0773: 1, L0648: 1, L0521: 1, L0768: 1, L0364: 1, L0533: 1,

HCOOT68	HCOOT68R	1121	147 - 488	3296	Arg-13 to Val-20.	L0650: 1, L0774: 1, L0376: 1, L0806: 1, L0652: 1, L0653: 1, L0606: 1, L0629: 1, L0659: 1, L0636: 1, L0542: 1, L0526: 1, L0518: 1, L0782: 1, L0783: 1, H0689: 1, H0690: 1, H0682: 1, H0683: 1, H0659: 1, H0660: 1, S0328: 1, S0330: 1, S0380: 1, H0522: 1, S0004: 1, H0555: 1, L0611: 1, S3014: 1, S0206: 1, L0755: 1, L0758: 1, H0444: 1, L0587: 1, L0589: 1, L0605: 1, L0591: 1, L0608: 1, L0361: 1, L0366: 1, H0665: 1, S0242: 1, S0194: 1, H0543: 1, H0423: 1, S0460: 1, S0456: 1 and H0506: 1. L0748: 20, H0251: 11, L0771: 11, L0740: 11, L0731: 11, L0757: 11, L0752: 10, S0126: 8, H0144: 7, L0596: 6, H0013: 5, L0665: 5,

L0747: 5, H0542: 5,
H0423: 5, H0624: 4,
T0002: 4, H0486: 4,
H0031: 4, H0169: 4,
H0616: 4, L0770: 4,
L0776: 4, L0666: 4,
S0152: 4, L0754: 4,
H0657: 3, H0663: 3,
S0418: 3, S0358: 3,
S0360: 3, H0038: 3,
L0764: 3, L0648: 3,
L0775: 3, L0655: 3,
L0749: 3, L0750: 3,
L0755: 3, S0026: 3,
H0422: 3, H0170: 2,
H0171: 2, H0341: 2,
H0402: 2, H0638: 2,
S0045: 2, S0046: 2,
H0156: 2, S0182: 2,
H0318: 2, L0471: 2,
S0003: 2, H0168: 2,
H0674: 2, H0090: 2,
H0063: 2, H0412: 2,
H0413: 2, H0100: 2,
S0440: 2, L0769: 2,
L0372: 2, L0662: 2,
L0659: 2, H0547: 2,
H0659: 2, S0328: 2,
S0380: 2, H0521: 2,
L0756: 2, L0758: 2,

L0759: 2, H0445: 2,
L0605: 2, L0604: 2,
L0595: 2, L0362: 2,
S0194: 2, H0543: 2,
S0040: 1, S0134: 1,
H0583: 1, H0656: 1,
S0116: 1, H0484: 1,
H0177: 1, S0420: 1,
L0005: 1, S0354: 1,
S0408: 1, L0717: 1,
H0369: 1, H0550: 1,
S0222: 1, H0574: 1,
H0632: 1, T0060: 1,
H0250: 1, H0108: 1,
H0575: 1, H0037: 1,
T0048: 1, H0309: 1,
H0596: 1, T0115: 1,
H0597: 1, H0327: 1,
H0046: 1, S0051: 1,
H0083: 1, H0061: 1,
S6028: 1, H0288: 1,
H0292: 1, H0039: 1,
H0553: 1, H0644: 1,
H0111: 1, H0032: 1,
H0383: 1, H0316: 1,
H0598: 1, H0087: 1,
H0059: 1, T0042: 1,
H0560: 1, S0438: 1,
H0509: 1, H0132: 1,
H0641: 1, H0633: 1,

HCOOU56	HCOOU56R	1122	3 - 257	3297	S0210: 1, H0529: 1, L0520: 1, L0763: 1, L0637: 1, L0800: 1, L0765: 1, L0773: 1, L0521: 1, L0768: 1, L0364: 1, L0766: 1, L0806: 1, L0653: 1, L0657: 1, L0518: 1, L0783: 1, L0383: 1, L0663: 1, L0664: 1, H0593: 1, H0689: 1, H0682: 1, H0670: 1, H0666: 1, H0648: 1, H0672: 1, L0355: 1, H0522: 1, S0013: 1, H0696: 1, H0134: 1, H0214: 1, S0406: 1, L0609: 1, S3014: 1, S0206: 1, L0744: 1, L0751: 1, H0343: 1, L0591: 1, L0601: 1, S0242: 1, L0697: 1, S0424: 1 and S0446: 1.
HCOOW72	HCOOW72R	1123	58 - 534	3298	Ala-20 to Asp-25, Asp-38 to Ser-59, Asn-103 to Glu-109, Pro-111 to Ser-119.
HCOOX01	HCOOX01R A	1124	153 - 311	3299	

| HCOOX07 | HCOOX07R | 1125 | 236 - 367 | 3300 | His-15 to Gly-29. | L0751: 14, L0659: 11, H0695: 10, L0666: 10, L0757: 9, L0743: 8, L0779: 8, H0581: 6, L0769: 6, L0748: 6, L0758: 6, H0556: 5, H0402: 5, S0360: 5, H0014: 5, H0271: 5, L0761: 5, L0667: 5, L0774: 5, L0653: 5, S0406: 5, H0436: 5, S0358: 4, S0132: 4, L0763: 4, L0776: 4, L0809: 4, L0664: 4, S0126: 4, L0731: 4, S0280: 3, H0150: 3, H0687: 3, L0662: 3, L0775: 3, L0375: 3, H0670: 3, L0749: 3, S0434: 3, H0295: 2, H0650: 2, S0408: 2, H0580: 2, H0411: 2, H0586: 2, H0559: 2, H0545: 2, H0050: 2, S0051: 2, H0083: 2, H0416: 2, H0688: 2, H0617: 2, H0063: 2, H0551: 2, S0344: 2, L0643: 2, L0764: 2, L0766: 2, L0649: 2, |

L0806: 2, L0657: 2,
L0647: 2, L0793: 2,
L0665: 2, S0428: 2,
S0332: 2, L0747: 2,
L0752: 2, H0624: 1,
H0171: 1, H0265: 1,
H0159: 1, H0713: 1,
S0218: 1, H0656: 1,
S0116: 1, H0483: 1,
H0663: 1, H0638: 1,
S0356: 1, S0444: 1,
H0339: 1, S0046: 1,
S0476: 1, S0278: 1,
S6022: 1, H0550: 1,
S0414: 1, L0622: 1,
H0486: 1, H0635: 1,
H0427: 1, H0156: 1,
H0599: 1, H0052: 1,
H0309: 1, H0597: 1,
H0546: 1, L0041: 1,
H0123: 1, H0510: 1,
H0188: 1, T0006: 1,
L0055: 1, H0673: 1,
H0674: 1, H0708: 1,
H0316: 1, H0634: 1,
H0087: 1, H0059: 1,
S0352: 1, S0448: 1,
S0306: 1, L0640: 1,
L0371: 1, L0770: 1,
L0638: 1, L5565: 1,

HCOOX48	HCOOX48R	1126	203 - 349	3301	Leu-13 to Gly-21, Ser-27 to Ser-42.	L0646: 1, L0642: 1, L0645: 1, L0771: 1, L0773: 1, L0648: 1, L0794: 1, L0805: 1, L0652: 1, L0661: 1, L0493: 1, L0635: 1, L0384: 1, L0788: 1, L0663: 1, S0052: 1, S0216: 1, S0374: 1, T0068: 1, H0689: 1, H0682: 1, H0659: 1, H0666: 1, H0672: 1, S0330: 1, H0539: 1, H0710: 1, H0521: 1, H0522: 1, H0696: 1, S0190: 1, S0404: 1, H0555: 1, L0744: 1, L0740: 1, L0756: 1, L0777: 1, L0759: 1, S0031: 1, H0595: 1, L0581: 1, L0361: 1 and S0194: 1.
HCOOY43	HCOOY43R	1127	1 - 315	3302	Asn-67 to Arg-73, Thr-96 to Gly-102.	
HCOPA60	HCOPA60RA	1128	3 - 446	3303	Ala-1 to Leu-7, Gly-14 to Arg-19, Tyr-34 to Asp-41.	L0748: 4, L0747: 4, L0779: 4, H0620: 3, L0770: 3, L0774: 3, L0622: 2, S0280: 2,

HCOPB03	HCOPB03R	1129	2 - 598	3304	
				Asp-28 to Glu-34, Ala-38 to Ile-44, Ala-64 to Arg-77, Gly-82 to Ala-88.	H0271: 2, H0290: 2, L0769: 2, L0800: 2, L0794: 2, L0766: 2, L0775: 2, H0547: 2, S0126: 2, S0380: 2, L0752: 2, L0758: 2, L0596: 2, H0295: 1, S0212: 1, H0125: 1, H0559: 1, T0060: 1, T0082: 1, H0150: 1, N0006: 1, H0024: 1, S0022: 1, H0688: 1, H0428: 1, T0023: 1, H0033: 1, H0424: 1, H0213: 1, H0412: 1, H0413: 1, H0633: 1, S0344: 1, L0646: 1, L0768: 1, L0804: 1, L0656: 1, L0783: 1, L0809: 1, L0788: 1, L0666: 1, L0663: 1, L0438: 1, H0670: 1, H0660: 1, H0522: 1, S0037: 1, L0439: 1, L0750: 1, L0759: 1, S0031: 1 and S0196: 1.

HCOPC45	HCOPC45R	1130	3 - 89	3305		
HCOPD67	HCOPD67R	1131	26 - 541	3306	Phe-1 to Gly-7.	
HCOPE27	HCOPE27R	1132	2 - 400	3307	Arg-37 to Gly-44, Asp-76 to Gly-87.	L0751: 16, L0601: 10, L0659: 4, H0670: 4, L0665: 3, S0376: 2, H0494: 2, L0758: 2, L0596: 2, H0587: 1, H0646: 1, L0372: 1, L0646: 1, L0662: 1, L0552: 1, L0376: 1, L0806: 1, L0664: 1, H0682: 1, H0435: 1, H0672: 1 and L0744: 1.
HCOPH51	HCOPH51RA	1133	243 - 398	3308		
HCOPI09	HCOPI09RA	1134	2 - 328	3309		
HCOPM42	HCOPM42R	1135	1 - 90	3310		
HCOPO34	HCOPO34R	1136	140 - 361	3311	Thr-6 to Cys-16, Tyr-40 to Lys-47, Ser-61 to Gln-66.	
HCOPO36	HCOPO36R	1137	143 - 601	3312	Arg-1 to Ser-7, Ser-25 to Phe-32, Leu-39 to Ser-44, Arg-58 to Gly-63, Ser-140 to Thr-145.	L0665: 3, H0682: 2, H0435: 2, L0751: 2, H0663: 1, L0021: 1, H0647: 1, L0806: 1, L0664: 1, H0683: 1, H0670: 1 and H0660: 1.
HCOPO88	HCOPO88R	1138	1 - 267	3313	Pro-7 to Phe-15, Gly-26 to Arg-31, Asp-35 to Glu-43.	
HCOPV41	HCOPV41R	1139	3 - 620	3314	Arg-4 to Lys-9,	

HCOPZ15	HCOPZ15R	1140	1 - 582	3315	Asp-61 to Asn-67, Thr-69 to Lys-75, Leu-105 to Ala-112, Gly-126 to His-134, Gly-172 to Glu-179, Pro-186 to Asn-199.	AR096: 11, AR061: 10, AR104: 5, AR060: 5, AR089: 5, AR055: 4, L0774: 3, S0358: 2, H0509: 2, L0809: 2, H0670: 2, L0745: 2, L0779: 2, L0752: 2, H0449: 1, T0048: 1, H0355: 1, H0428: 1, H0617: 1, S0438: 1, H0529: 1, L0770: 1, L0761: 1, L0773: 1, L0803: 1, L0804: 1, L0375: 1, L0659: 1, L0382: 1, L0791: 1, S0328: 1, H0134: 1, L0743: 1, L0748: 1, L0747: 1 and L0756: 1.
HCOQA38	HCOQA38R	1141	41 - 271	3316	His-39 to Asn-45, Cys-68 to Cys-75.	
HCOQA80	HCOQA80R	1142	1 - 192	3317	His-37 to Asp-42.	
HCOQB12	HCOQB12R	1143	1 - 582	3318	Lys-6 to Asp-11, Gly-22 to Phe-27,	

HCOQB56	HCOQB56R	1144	1 - 66	3319	His-54 to Gly-63, Asp-73 to Lys-79.	H0670: 2 and H0589: 1.
HCOQB58	HCOQB58R	1145	281 - 466	3320	Lys-1 to Gln-7.	
HCOQC71	HCOQC71R	1146	3 - 248	3321	Lys-1 to Asp-21, Lys-61 to Leu-71.	L0794: 7, L0803: 5, L0809: 5, L0666: 5, L0751: 5, L0759: 3, H0674: 2, L0768: 2, L0774: 2, L0663: 2, L0779: 2, L0758: 2, S0360: 1, H0455: 1, H0618: 1, H0263: 1, H0169: 1, H0616: 1, H0059: 1, S0112: 1, L0451: 1, L0770: 1, L0639: 1, L0648: 1, L0804: 1, L0776: 1, L0783: 1, L0789: 1, L0790: 1, L0791: 1, L0664: 1, L0665: 1, H0670: 1, H0672: 1 and L0608: 1.
HCOQD29	HCOQD29R	1147	1 - 570	3322	Glu-66 to Arg-72, Pro-148 to Ser-154.	
HCOQD38	HCOQD38R	1148	106 - 639	3323	Met-3 to Ser-16, Cys-25 to Asp-35, Glu-42 to Lys-52, Ser-55 to Glu-63, Glu-74 to Thr-79,	

| HCOQD49 | HCOQD49R | 1149 | 8 - 196 | 3324 | Ile-81 to Ser-102, Ser-109 to Glu-118, Thr-138 to Glu-158. Asp-39 to Ser-46. | S0358: 15, S0003: 13, S0126: 11, L0754: 11, S0410: 10, H0599: 9, S0440: 9, H0529: 9, L0748: 9, H0341: 8, H0373: 8, H0591: 8, L0588: 8, L0362: 8, H0661: 7, S0007: 7, L0471: 7, L0731: 7, H0170: 6, T0042: 6, S0374: 6, H0624: 5, S0408: 5, H0013: 5, H0046: 5, H0031: 5, H0551: 5, H0144: 5, L0752: 5, H0657: 4, S0346: 4, S0214: 4, H0039: 4, H0644: 4, H0616: 4, H0413: 4, H0494: 4, H0670: 4, S0404: 4, S3014: 4, L0740: 4, L0747: 4, L0750: 4, L0753: 4, L0758: 4, L0581: 4, S0424: 4, S0040: 3, H0663: 3, H0638: 3, S0356: 3, S0360: 3, S0222: 3, H0497: 3, |

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S0206: 3, L0439: 3,
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H0423: 3, S0114: 2,
S0116: 2, S0212: 2,
H0484: 2, H0125: 2,
S0418: 2, S0376: 2,
S0444: 2, H0580: 2,
H0393: 2, H0369: 2,
H0370: 2, H0409: 2,
H0331: 2, H0574: 2,
H0486: 2, H0156: 2,
H0042: 2, H0318: 2,
H0581: 2, H0196: 2,
H0012: 2, L0163: 2,
H0083: 2, H0266: 2,
H0328: 2, H0615: 2,
L0194: 2, L0483: 2,
H0673: 2, H0169: 2,
S0364: 2, H0316: 2,
H0598: 2, S0036: 2,
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H0038: 1, H0634: 1,
H0412: 1, H0100: 1,
H0560: 1, H0625: 1,
H0561: 1, H0132: 1,
H0130: 1, H0646: 1,
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H0660: 1, H0648: 1,
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H0522: 1, S0044: 1,
S0146: 1, S0406: 1,
H0555: 1, H0436: 1,
H0447: 1, H0627: 1,

Clone	cDNA Clone ID		NT Range	SEQ ID NO:	Features	Clone Distribution
HCOQF77	HCOQF77R	1150	1 - 357	3325		H0444: 1, H0595: 1, L0608: 1, S0011: 1, H0668: 1, S0026: 1, H0136: 1, H0542: 1 and H0422: 1.
HCOQG37	HCOQG37R	1151	3 - 395	3326	Pro-26 to Asn-34, Pro-50 to Pro-56, Arg-64 to Val-69, Val-97 to Lys-103.	
HCOQG47	HCOQG47R	1152	208 - 522	3327		
HCOQH46	HCOQH46R	1153	2 - 583	3328		
HCOQI14	HCOQI14R	1154	11 - 187	3329	Arg-10 to Ser-16.	L0777: 9, L0766: 5, L0748: 3, L0439: 3, H0599: 2, L0774: 2, L0747: 2, L0749: 2, L0779: 2, L0731: 2, H0305: 1, L0534: 1, H0675: 1, S0046: 1, H0004: 1, H0083: 1, L0456: 1, T0042: 1, S0344: 1, S0002: 1, L0369: 1, L0770: 1, L0773: 1, L0803: 1, L0776: 1, L0809: 1, L0791: 1, H0658: 1, H0670: 1, S3012: 1, L0756: 1, L0780: 1 and L0759: 1.
HCOQI67	HCOQI67R	1155	1 - 126	3330		

HCOQJ06	HCOQJ06R	1156	8 - 457	3331		
HCOQJ07	HCOQJ07R	1157	3 - 707	3332		
HCOQJ36	HCOQJ36R	1158	149 - 328	3333		L0752: 4, H0156: 2, L0803: 2, L0776: 2, H0648: 2, L0439: 2, H0431: 1, H0575: 1, H0014: 1, T0023: 1, H0598: 1, H0591: 1, H0059: 1, L0772: 1, L0372: 1, L0764: 1, L0771: 1, L0773: 1, L0804: 1, L0774: 1, L0775: 1, L0375: 1, L0805: 1, L0629: 1, L0789: 1, L0665: 1, L0438: 1, H0658: 1, H0670: 1 and L0779: 1.
HCOQJ79	HCOQJ79R	1159	1 - 471	3334		
HCOQK86	HCOQK86R	1160	1 - 519	3335		
HCOQL87	HCOQL87R	1161	3 - 398	3336		
HCOQM87	HCOQM87R	1162	3 - 143	3337	Arg-1 to Val-23.	
HCOQO79	HCOQO79R	1163	2 - 613	3338	Phe-94 to Glu-102, Gln-133 to Thr-140.	
HCOQP32	HCOQP32R	1164	3 - 149	3339		
HCOQS11	HCOQS11R	1165	75 - 443	3340		
HCOQU15	HCOQU15R	1166	2 - 430	3341	Asn-29 to Gly-38, Glu-50 to Gln-58.	L0665: 4, L0743: 4, H0486: 3, H0123: 3, H0024: 3, L0528: 3, L0748: 3, H0170: 2,

HCOQU92	HCOQU92R	1167	46 - 315	3342	Ile-3 to Arg-8, Pro-17 to Ser-22,	H0050: 2, L0769: 2, H0670: 2, L0747: 2, L0750: 2, H0171: 1, H0556: 1, H0583: 1, H0657: 1, S0212: 1; H0208: 1, H0619: 1, S0278: 1, H0550: 1, S0222: 1, H0438: 1, H0613: 1, H0331: 1, H0013: 1, H0635: 1, H0002: 1, S0474: 1, H0581: 1, H0009: 1, L0157: 1, H0012: 1, S0025: 1, H0239: 1, H0375: 1, H0266: 1, H0598: 1, H0135: 1, H0163: 1, H0087: 1, H0551: 1, H0494: 1, S0210: 1, L0640: 1, L0763: 1, L0646: 1, L0387: 1, L0766: 1, L0805: 1, L0776: 1, L0655: 1, L0657: 1, H0144: 1, H0520: 1, H0547: 1, H0519: 1, H0689: 1, H0658: 1, H0576: 1, L0779: 1 and L0759: 1.	L0805: 7, L0776: 4, L0748: 4, H0545: 3,

Ser-28 to Ser-34, Thr-45 to Thr-56, Ser-58 to Thr-63, Tyr-74 to Thr-79.	S0438: 3, H0641: 3, L0588: 3, L0592: 3, T0049: 2, H0549: 2, H0431: 2, H0486: 2, L0471: 2, H0169: 2, S0372: 2, L0520: 2, L0553: 2, L0768: 2, L0649: 2, L0655: 2, L0527: 2, L0783: 2, L0532: 2, H0144: 2, H0682: 2, H0670: 2, S0378: 2, S0406: 2, L0750: 2, S0026: 2, H0542: 2, H0170: 1, H0716: 1, S0212: 1, H0638: 1, H0125: 1, S0444: 1, H0580: 1, H0393: 1, H0411: 1, H0587: 1, L0586: 1, T0114: 1, H0390: 1, T0048: 1, H0318: 1, H0596: 1, H0620: 1, H0375: 1, T0006: 1, H0606: 1, H0429: 1, S0294: 1, H0386: 1, L0770: 1, L0769: 1, L3904: 1, L0374: 1, L0773: 1, L0662: 1, L0766: 1, L0803: 1, L0774: 1, L0526: 1,

| HCOQV27 | HCOQV27R | 1168 | 3 - 239 | 3343 | Glu-1 to Lys-17, Val-25 to Asn-30, Phe-36 to Pro-42. | H0250: 35, L0770: 9, H0635: 6, L0483: 6, L0766: 6, H0521: 6, L0745: 6, S0003: 5, H0623: 5, L0776: 5, H0445: 5, S0408: 4, H0411: 4, H0634: 4, H0641: 4, L0598: 4, H0650: 3, H0656: 3, S0360: 3, H0574: 3, H0486: 3, H0373: 3, H0687: 3, H0591: 3, H0040: 3, L0662: 3, L0775: 3, L0665: 3, S0216: 3, L0748: 3, L0777: 3, S0134: 2, H0663: 2, S0007: 2, H0550: 2, H0013: 2, H0581: 2, H0510: 2, S0214: 2, H0615: 2, H0674: 2, S0440: 2, L0809: 1, L0793: 1, L0664: 1, S0053: 1, H0689: 1, H0684: 1, H0659: 1, H0658: 1, H0648: 1, S0330: 1, H0521: 1, H0522: 1, S0404: 1, L0749: 1, L0780: 1, L0731: 1 and H0543: 1. |

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L0362: 2, L0366: 2,
H0543: 2, H0423: 2,
H0170: 1, S0114: 1,
T0049: 1, S0218: 1,
L0002: 1, H0346: 1,
H0661: 1, H0638: 1,
S0418: 1, S0356: 1,
S0354: 1, S0358: 1,
S0376: 1, H0580: 1,
H0619: 1, H0645: 1,
L0717: 1, H0431: 1,
H0609: 1, H0587: 1,
H0632: 1, H0427: 1,
S0280: 1, L0021: 1,
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S0049: 1, H0309: 1,
H0596: 1, H0024: 1,
S0362: 1, H0179: 1,
H0271: 1, H0416: 1,
S0336: 1, S0316: 1,
H0328: 1, H0622: 1,
H0553: 1, H0032: 1,
H0124: 1, H0708: 1,

HCOQX38	HCOQX38R	1169	23 - 439	3344		S0366: 1, H0087: 1, T0067: 1, H0100: 1, S0294: 1, H0633: 1, H0649: 1, S0422: 1, UNKWN: 1, L0667: 1, L0641: 1, L0764: 1, L0794: 1, L0649: 1, L0774: 1, L0784: 1, L0805: 1, L0657: 1, L0659: 1, L0791: 1, L0792: 1, L0664: 1, S0052: 1, S0428: 1, H0699: 1, H0703: 1, H0693: 1, L0438: 1, H0547: 1, H0593: 1, H0659: 1, H0670: 1, H0522: 1, S0013: 1, H0555: 1, H0436: 1, H0576: 1, H0478: 1, S3014: 1, L0740: 1, L0746: 1, L0758: 1, L0588: 1, L0595: 1, L0361: 1, S0026: 1, S0242: 1, S0194: 1 and H0352: 1.
HCOQY33	HCOQY33R	1170	1 - 321	3345	Trp-2 to Gly-7.	
HCOQY43	HCOQY43R	1171	271 - 510	3346		S0282: 1, L0021: 1, S0438: 1, L0775: 1, L0666: 1, L0663: 1,

HCOQZ02	HCOQZ02R	1172	387 - 473	3347	Lys-1 to Lys-13.	H0659: 1, H0670: 1 and L0758: 1.
HCOQZ86	HCOQZ86R	1173	1 - 507	3348		
HCORA95	HCORA95R	1174	2 - 136	3349	Pro-1 to Phe-15.	
HCORB20	HCORB20R	1175	14 - 292	3350	Val-1 to Gly-9.	
HCORB43	HCORB43R	1176	1 - 303	3351		
HCORB66	HCORB66R	1177	3 - 611	3352	Asn-1 to Gly-8.	
HCORI18	HCORI18R	1178	105 - 317	3353	Asn-7 to Pro-33, Gly-40 to Gly-46, Tyr-49 to Tyr-71.	L0770: 3, H0685: 1, H0581: 1, H0553: 1, S0150: 1 and H0670: 1.
HCORI25	HCORI25R	1179	3 - 419	3354	Leu-35 to Tyr-40.	L0754: 14, H0052: 13, L0748: 13, H0556: 12, L0591: 12, L0755: 11, L0752: 10, L0731: 9, L0601: 9, L0439: 8, L0777: 8, L0596: 8, H0046: 7, H0521: 7, L0758: 7, H0599: 6, H0622: 6, S0002: 6, L0646: 6, L0593: 6, H0265: 5, S0474: 5, L0776: 5, L0666: 5, L0741: 5, L0747: 5, S0026: 5, H0543: 5, H0619: 4, S0222: 4, H0013: 4, H0590: 4, H0544: 4, H0620: 4, H0124: 4, H0038: 4,

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| H0670: 4, S0378: 4, |
| L0740: 4, L0749: 4, |
| L0750: 4, S0434: 4, |
| L0588: 4, L0589: 4, |
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| S6026: 3, H0486: 3, |
| S0010: 3, S0051: 3, |
| T0010: 3, H0083: 3, |
| H0266: 3, S0250: 3, |
| H0031: 3, H0591: 3, |
| S0142: 3, S0344: 3, |
| H0529: 3, L0770: 3, |
| L0769: 3, L0761: 3, |
| L0662: 3, L0774: 3, |
| L0653: 3, L0663: 3, |
| L0665: 3, L0438: 3, |
| H0435: 3, S0152: 3, |
| H0696: 3, S0342: 2, |
| T0049: 2, H0657: 2, |
| S0212: 2, H0638: 2, |
| S0418: 2, S0354: 2, |
| S0444: 2, S0360: 2, |
| S0046: 2, S0132: 2, |
| S0476: 2, L0717: 2, |
| S0278: 2, H0549: 2, |
| H0438: 2, H0587: 2, |
| H0333: 2, H0427: 2, |
| H0706: 2, H0545: 2, |

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L0595: 2, H0653: 2,
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HCQCR82	HCQCR82R	1180	48 - 206		L0667: 1, L0363: 1, L0794: 1, L0803: 1, L0375: 1, L0651: 1, L0806: 1, L0805: 1, L0654: 1, L0379: 1, L0526: 1, L0519: 1, L0647: 1, L0791: 1, S0428: 1, H0144: 1, S0374: 1, H0520: 1, S0126: 1, H0711: 1, H0660: 1, H0672: 1, S0328: 1, H0539: 1, S0406: 1, H0555: 1, H0436: 1, H0627: 1, S0432: 1, S0037: 1, L0743: 1, L0744: 1, L0751: 1, S0031: 1, S0394: 1, L0592: 1, L0485: 1, L0608: 1, L0366: 1, H0136: 1, H0506: 1 and H0352: 1.
HCRME42	HCRME42R	1181	1 - 537	3355	Glu-9 to Gly-17.
				3356	Lys-14 to Gly-26, Glu-33 to Arg-44, Pro-64 to Pro-69, Pro-79 to Asn-88, Thr-109 to Pro-123.
HDABR53	HDABR53R	1182	2 - 463	3357	
HDLBE03	HDLBE03R	1183	158 - 325	3358.	Ala-17 to Asn-23.
HDPFI26	HDPFI26R	1184	37 - 303	3359	Ser-1 to Thr-8,

HDTAQ74	HDTAQ74R	1185	133 - 414	3360	Glu-17 to Ala-32, Arg-39 to Trp-47.	L0759: 10, L0774: 3, H0648: 3, H0686: 2, S0360: 2, L0622: 2, H0486: 2, L0521: 2, L0775: 2, H0659: 2, S0328: 2, L0779: 2, L0755: 2, H0341: 1, S0354: 1, S0358: 1, H0351: 1, S0222: 1, L0021: 1, H0025: 1, L0105: 1, T0115: 1, H0545: 1, H0571: 1, H0050: 1, L0471: 1, S6028: 1, S0003: 1, H0031: 1, H0316: 1, H0038: 1, H0087: 1, H0494: 1, H0509: 1, S0142: 1, L0520: 1, L0769: 1, L0638: 1, L0772: 1, L0794: 1, L0803: 1, L0804: 1, L0382: 1, L0367: 1, L0665: 1, S0374: 1, H0690: 1, H0684: 1, S0044: 1, S3012: 1, S0027: 1, L0744: 1, L0777: 1, L0758: 1, L0604: 1, S0026: 1 and

						S0276: 1.	
HDTBP08	HDTBP08R	1186	231 - 431	3361	Leu-21 to Ala-27, Pro-48 to Gly-55.		L0748: 50, L0754: 42, L0731: 31, H0644: 30, L0747: 29, H0551: 22, S0418: 21, L0659: 17, H0619: 15, L0663: 14, L0666: 13, S0360: 10, H0622: 10, H0031: 10, H0553: 10, L0662: 10, S0126: 10, L0757: 10, L0603: 10, S0420: 8, H0486: 8, H0013: 8, H0050: 8, H0623: 8, L0717: 7, H0144: 7, L0770: 6, L0750: 6, H0427: 5, H0024: 5, H0328: 5, H0030: 5, L0773: 5, L0665: 5, L0749: 5, H0713: 4, T0039: 4, S0280: 4, H0012: 4, H0038: 4, L0794: 4, L0774: 4, L0775: 4, L0805: 4, H0624: 3, H0170: 3, H0171: 3, S0356: 3, H0329: 3, S0046: 3,
HDTDA21	HDTDA21R	1187	207 - 431	3362	Ala-14 to Leu-20.		
HDTDB88	HDTDB88R	1188	102 - 215	3363	Tyr-25 to Phe-32.		
HDTJR38	HDTJR38R	1189	179 - 364	3364			

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H0591: 3, L0598: 3,
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H0036: 1, H0274: 1,
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H0081: 1, H0019: 1,
T0003: 1, H0057: 1,
H0015: 1, H0373: 1,
H0275: 1, H0594: 1,
S0003: 1, H0039: 1,
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S0364: 1, S0036: 1,
H0090: 1, H0063: 1,
H0087: 1, H0268: 1,
H0412: 1, H0059: 1,
H0100: 1, L0564: 1,
H0561: 1, S0210: 1,

HE8QX44	HE8QX44R	1190	1 - 288	3365	L0369: 1, L3904: 1, L0800: 1, L0641: 1, L0764: 1, L5564: 1, L0804: 1, L0378: 1, L0806: 1, L0807: 1, L0526: 1, L0787: 1, L0788: 1, L0791: 1, L0793: 1, S0374: 1, H0691: 1, T0068: 1, H0690: 1, H0682: 1, H0684: 1, H0658: 1, H0672: 1, H0651: 1, H0518: 1, H0696: 1, S0146: 1, S0037: 1, S3014: 1, S0027: 1, S0028: 1, S0206: 1, S0032: 1, H0445: 1, L0589: 1, L0590: 1, L0485: 1, L0604: 1, H0668: 1, H0653: 1, S0242: 1, S0194: 1 and H0008: 1. Thr-8 to Thr-22, Phe-42 to Lys-51, Arg-60 to Lys-69.
HE9QU94	HE9QU94R	1191	3 - 170	3366	Arg-1 to Cys-23, Trp-25 to Ser-35.
HEAHF02	HEAHF02R	1192	32 - 376	3367	Ser-10 to Thr-34, Ser-37 to Asn-89.
HEEAY40	HEEAY40R	1193	3 - 128	3368	Thr-15 to Ser-26.

HEGAF68	HEGAF68R	1194	45 - 221	3369	Glu-9 to Gly-17.	
HEOSP11	HEOSP11R	1195	96 - 395	3370	Pro-13 to Leu-25.	H0457: 14, L0751: 13, H0617: 8, L0761: 7, L0666: 6, L0664: 6, L0665: 6, H0593: 6, L0662: 5, L0748: 5, H0052: 4, H0014: 4, H0529: 4, L0655: 4, L0809: 4, L0663: 4, H0436: 4, L0747: 4, L0758: 4, H0592: 3, H0587: 3, H0581: 3, L0763: 3, L0769: 3, L0659: 3, H0539: 3, L0779: 3, S0434: 3, H0506: 3, H0295: 2, H0650: 2, H0657: 2, L0005: 2, S0356: 2, S0442: 2, S0354: 2, S0360: 2, H0580: 2, H0733: 2, H0553: 2, H0135: 2, H0560: 2, H0625: 2, H0647: 2, L0374: 2, L0657: 2, L0647: 2, H0682: 2, H0672: 2, H0521: 2, S0028: 2, L0743: 2, L0749: 2, L0752: 2, L0755: 2, L0759: 2, L0593: 2, S0446: 2,

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HFABK01	HFABK01R	1196	26 - 112	3371			
HFADS75	HFADS75R	1197	102 - 365	3372	Asn-4 to Tyr-9. Ala-16 to Arg-26, Pro-68 to Gly-78.	L0639: 1, L0646: 1, L0800: 1, L0641: 1, L0642: 1, L0648: 1, L0794: 1, L0766: 1, L0649: 1, L0650: 1, L0774: 1, L0651: 1, L0653: 1, L0776: 1, L0629: 1, L0656: 1, L0636: 1, L5623: 1, L0792: 1, S0428: 1, H0726: 1, S0310: 1, H0690: 1, H0684: 1, H0658: 1, H0670: 1, S0330: 1, S0380: 1, S0404: 1, S0406: 1, H0555: 1, L0611: 1, H0540: 1, L0741: 1, L0744: 1, L0777: 1, S0436: 1, L0601: 1, L0366: 1, S0106: 1, S0192: 1, H0423: 1 and S0424: 1.	
HFIBG63	HFIBG63R	1198	2 - 409	3373			
HFIJB15	HFIJB15R	1199	32 - 151	3374			
HFIXK57	HFIXK57R	1200	2 - 211	3375		H0594: 18, L0777: 10, L0766: 6, H0595: 6, H0170: 5, H0373: 5,	

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S0412: 5, H0411: 4,
L0662: 4, L0756: 4,
L0731: 4, S0260: 4,
H0624: 3, H0171: 3,
S0282: 3, S0388: 3,
L0776: 3, L0752: 3,
L0758: 3, S0194: 3,
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H0177: 1, H0402: 1,
S0358: 1, S0360: 1,
S0046: 1, S0278: 1,
H0550: 1, S0222: 1,
H0431: 1, H0600: 1,
H0592: 1, H0587: 1,
H0486: 1, L0021: 1,
H0599: 1, H0037: 1,
H0263: 1, H0545: 1,
H0050: 1, H0057: 1,
L0163: 1, T0023: 1,
H0598: 1, S0036: 1,
H0551: 1, H0100: 1,
H0359: 1, L0065: 1,
H0649: 1, L0769: 1,

HFIZQ64	HFIZQ64R	1201	18 - 137	3376	Glu-27 to Leu-36.	L0761: 1, L0667: 1, L0630: 1, L0372: 1, L0764: 1, L0521: 1, L0533: 1, L0775: 1, L0651: 1, L0806: 1, L0655: 1, L0656: 1, S0374: 1, H0547: 1, S0328: 1, H0539: 1, H0696: 1, L0741: 1, L0744: 1, L0740: 1, L0754: 1, L0747: 1, L0750: 1, L0753: 1, L0759: 1, S0031: 1, L0485: 1, L0362: 1, S0242: 1, H0543: 1 and S0398: 1.
HFKKK36	HFKKK36R	1202	3 - 86	3377	Pro-3 to Tyr-22.	
HFPEC93	HFPEC93R	1203	75 - 233	3378	Lys-17 to Thr-23.	
HFPIX37	HFPIX37R	1204	1 - 270	3379	Pro-75 to Cys-89.	AR089: 4, AR096: 3, AR033: 3, AR060: 3, AR061: 1, AR104: 1, AR055: 1, AR053: 0, AR039: 0, AR052: 0 H0583: 1; H0662: 1, S0222: 1, S0049: 1, H0272: 1, H0670: 1, H0521: 1, H0555: 1 and S0436: 1.
HFTDK36	HFTDK36R	1205	18 - 314	3380	Cys-5 to Pro-21,	

HFVIB28	HFVIB28R	1206	11 - 250	3381	His-66 to Leu-77, Gln-80 to Ala-88, Tyr-92 to Ser-98.		
HFXGR60	HFXGR60R	1207	353 - 57	3382		S0001: 1	
HHAUD07	HHAUD07R	1208	304 - 426	3383	Val-24 to Leu-31.		
HHBFO21	HHBFO21R	1209	54 - 230	3384			
HHEVG50	HHEVG50R	1210	1 - 474	3385			
HHFGQ65	HHFGQ65RA	1211	53 - 277	3386	Arg-2 to Ser-7.		
HHFOE48	HHFOE48RP00B	1212	181 - 426	3387			H0666: 13, S0358: 10, H0620: 10, L0750: 8, L0747: 7, L0731: 7, H0135: 5, L0659: 5, L0740: 5, L0757: 5, S0360: 4, H0123: 4, S0022: 4, L0666: 4, L0665: 4, S0028: 4, L0748: 4, L0777: 4, L0588: 4, H0265: 3, S0420: 3, H0208: 3, H0545: 3, H0046: 3, H0024: 3, H0284: 3, H0100: 3, L0650: 3, L0375: 3, L0382: 3, H0651: 3, L0755: 3, H0352: 3, S0278: 2, H0592: 2, H0333: 2, H0253: 2, H0544: 2, H0081: 2, H0012: 2, H0266: 2, H0286: 2,

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HHSFG15	HHSFG15R	1213	3 - 62	3388	H0615: 1, H0688: 1, H0031: 1, H0634: 1, H0087: 1, H0334: 1, H0633: 1, H0646: 1, L0772: 1, L0800: 1, L0643: 1, L0764: 1, L0662: 1, L0767: 1, L0775: 1, L0651: 1, L0806: 1, L0805: 1, L0776: 1, L0656: 1, L0783: 1, L0383: 1, L0543: 1, L0789: 1, L0663: 1, H0593: 1, H0684: 1, H0659: 1, H0658: 1, H0660: 1, H0709: 1, S0152: 1, H0521: 1, H0627: 1, L0611: 1, L0439: 1, L0745: 1, L0759: 1, L0593: 1, L0361: 1, L0603: 1, S0026: 1, H0667: 1 and H0506: 1.
HHSGP15	HHSGP15R	1214	77 - 142	3389	
HHSGQ17	HHSGQ17R	1215	112 - 270	3390	
HKBAD05	HKBAD05R	1216	49 - 315	3391	Pro-13 to Leu-18, Leu-37 to Arg-42, Lys-65 to Gly-77.
HKZAD21	HKZAD21R	1217	244 - 405	3392	Val-40 to Tyr-46.
HKZAE07	HKZAE07R	1218	1 - 138	3393	L0752: 11, L0662: 9,

L0596: 9, L0659: 8, L0665: 7, L0766: 5, L0750: 5, L0521: 4, L0740: 4, L0757: 4, L0771: 3, L0775: 3, L0809: 3, L0666: 3, L0664: 3, H0648: 3, L0755: 3, L0758: 3, L0591: 3, L0785: 2, L0717: 2, H0036: 2, H0052: 2, H0529: 2, L0769: 2, L0637: 2, L0646: 2, L0765: 2, L0651: 2, L0653: 2, L0776: 2, L0655: 2, L0663: 2, H0682: 2, L0748: 2, L0439: 2, L0731: 2, L0759: 2, L0593: 2, L0595: 2, L0601: 2, H0686: 1, S0134: 1, L0778: 1, H0484: 1, H0661: 1, H0662: 1, H0393: 1, H0643: 1, H0002: 1, H0599: 1, H0318: 1, S0049: 1, H0251: 1, L0040: 1, H0545: 1, L0041: 1, N0006: 1, N0007: 1, S0388: 1, L0483: 1, H0606: 1,

HKZAG45	HKZAG45RA	1219	79 - 327	3394	Gly-1 to Val-7, Lys-15 to Leu-25, Pro-52 to Cys-57.	H0038: 1, H0040: 1, H0551: 1, H0413: 1, H0059: 1, H0560: 1, H0538: 1, S0002: 1, L0763: 1, L0772: 1, L0364: 1, L0649: 1, L0661: 1, L0657: 1, L0542: 1, L0526: 1, L0783: 1, L0382: 1, L0519: 1, L0528: 1, L0788: 1, L0565: 1, L0438: 1, H0547: 1, H0689: 1, H0690: 1, H0435: 1, H0658: 1, H0660: 1, S0328: 1, L0602: 1, S0004: 1, S0044: 1, S0404: 1, H0555: 1, H0436: 1, S0028: 1, L0742: 1, L0751: 1, L0747: 1, L0756: 1, L0592: 1, L0581: 1, L0603: 1, H0543: 1, H0422: 1 and H0352: 1.
HKZAI14	HKZAI14R	1220	3 - 368	3395	Lys-47 to Glu-52, Ala-71 to Asp-76, Asp-89 to Ser-110.	

HKZAI68	HKZAI68RA	1221	2 - 79	3396	Ser-9 to Ala-15.	S0474: 22, S0360: 13, H0556: 11, S0358: 11, L0747: 11, H0087: 10, S0126: 10, H0124: 9, S0410: 8, S0278: 8, H0024: 8, L0588: 8, S0206: 7, S0046: 6, L0731: 6, H0543: 6, H0265: 5, S0212: 5, S0045: 5, H0620: 5, H0594: 5, H0090: 5, H0063: 5, H0551: 5, T0042: 5, L0530: 5, H0144: 5, H0696: 5, S3014: 5, L0758: 5, S0192: 5, S0116: 4, H0549: 4, H0013: 4, H0530: 4, H0544: 4, H0081: 4, L0471: 4, H0012: 4, H0644: 4, H0163: 4, H0412: 4, H0100: 4, L0769: 4, L0771: 4, S0027: 4, L0740: 4, L0757: 4, L0605: 4, H0423: 4, H0624: 3, H0713: 3, S0418: 3, S0444: 3, S0408: 3, H0251: 3, H0545: 3, S0051: 3, H0083: 3, H0290: 3,

T0041: 3, S0344: 3, L0662: 3, L0768: 3, L0806: 3, L0659: 3, L0608: 3, S0194: 3, H0352: 3, S0040: 2, H0717: 2, H0716: 2, S0134: 2, H0341: 2, H0402: 2, H0305: 2, S0356: 2, H0580: 2, S0476: 2, H0411: 2, H0392: 2, H0586: 2, H0575: 2, H0052: 2, H0327: 2, H0546: 2, H0373: 2, L0163: 2, H0687: 2, H0284: 2, H0286: 2, H0428: 2, H0039: 2, H0628: 2, H0413: 2, H0056: 2, S0440: 2, L0598: 2, L0770: 2, L0521: 2, L0776: 2, L0542: 2, L0783: 2, L0529: 2, L0663: 2, H0519: 2, H0659: 2, S0378: 2, H0518: 2, S0044: 2, H0555: 2, H0627: 2, S0028: 2, L0748: 2, L0756: 2, L0755: 2, S0031: 2, H0445: 2, L0596: 2, L0591: 2,

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S0282: 1, H0484: 1,
H0255: 1, H0663: 1,
S0420: 1, S0376: 1,
L0717: 1, S6022: 1,
H0441: 1, H0370: 1,
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H0492: 1, L0623: 1,
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H0635: 1, H0427: 1,
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L0021: 1, H0706: 1,
H0004: 1, H0581: 1,
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H0086: 1, H0041: 1,
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H0051: 1, N0007: 1,
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H0266: 1, H0271: 1,
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H0135: 1, H0616: 1,

H0623: 1, S0438: 1,
H0132: 1, S0150: 1,
H0633: 1, S0144: 1,
S0210: 1, S0002: 1,
S0426: 1, H0695: 1,
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L0654: 1, L0657: 1,
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L0518: 1, L0782: 1,
L0384: 1, L0519: 1,
L0544: 1, L0793: 1,
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H0689: 1, H0682: 1,
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S0037: 1, S0032: 1,
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L0779: 1, L0759: 1,
S0260: 1, H0595: 1,
H0707: 1, L0604: 1,

HKZAQ39	HKZAQ39R	1222	1 - 480	3397	Ser-1 to Lys-6, Asp-48 to Gly-55, Pro-68 to Phe-76, Pro-83 to Gly-89, Asn-100 to Asp-108, Glu-134 to Lys-141, Lys-144 to Asp-160.	H0668: 1, H0653: 1, H0542: 1, H0422: 1, S0042: 1, S0456: 1 and S0446: 1.
HKZAR58	HKZAR58R	1223	3 - 266	3398	Met-41 to Gln-47.	
HKZAS59	HKZAS59R	1224	1 - 462	3399	Gln-54 to Leu-59, Glu-70 to Lys-76, Lys-147 to Ser-154.	
HKZAS64	HKZAS64R	1225	1 - 276	3400	Asp-1 to His-35, Pro-67 to His-75.	
HKZAS84	HKZAS84R	1226	2 - 103	3401	Ser-11 to Gly-18.	L0743: 19, L0731: 13, L0744: 12, L0748: 11, L0666: 9, L0751: 9, L0664: 8, H0144: 8, H0333: 7, H0617: 7, L0769: 7, L0662: 7, S0022: 6, H0616: 6, H0087: 6, L0483: 5, H0181: 5, L0517: 5, L0519: 5, L0754: 5, H0677: 5, S0051: 4, S0344: 4, L0663: 4,

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L0362: 2, L0601: 2,
S0192: 2, S0424: 2,
L0600: 2, H0556: 1,
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H0294: 1, S0114: 1,
S0134: 1, H0650: 1,
H0657: 1, L0785: 1,
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H0483: 1, H0254: 1,
H0671: 1, H0662: 1,
H0402: 1, H0638: 1,
S0418: 1, S0356: 1,
T0007: 1, S0358: 1,
S0007: 1, H0208: 1,
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L0623: 1, L0477: 1,
T0114: 1, S0280: 1,
L0021: 1, H0590: 1,
H0004: 1, H0618: 1,

S0010: 1, H0318: 1, S0049: 1, H0251: 1, H0596: 1, T0110: 1, H0327: 1, H0009: 1, H0123: 1, L0471: 1, H0006: 1, H0014: 1, H0051: 1, S0388: 1, H0510: 1, S0334: 1, H0687: 1, T0023: 1, T0006: 1, H0424: 1, H0182: 1, H0606: 1, H0383: 1, H0165: 1, H0166: 1, S0366: 1, H0135: 1, H0090: 1, T0067: 1, H0488: 1, H0412: 1, T0069: 1, S0112: 1, L0564: 1, H0494: 1, S0015: 1, H0561: 1, L0762: 1, L0640: 1, L0637: 1, L0761: 1, L0667: 1, L0772: 1, L0373: 1, L0646: 1, L0643: 1, L0374: 1, L0765: 1, L0773: 1, L0648: 1, L0521: 1, L0768: 1, L0364: 1, L0533: 1, L0650: 1, L0774: 1, L0376: 1, L0806: 1, L0652: 1, L0653: 1,

HKZAV69	HKZAV69R	1227	2 - 412	3402	Val-6 to Lys-13, Tyr-23 to Asn-33, Lys-46 to Lys-51, Leu-75 to Asn-85, Asp-101 to Glu-106.	L0606: 1, L0629: 1, L0659: 1, L0636: 1, L0542: 1, L0526: 1, L0518: 1, L0782: 1, L0783: 1, H0689: 1, H0690: 1, H0682: 1, H0683: 1, H0659: 1, H0660: 1, S0328: 1, S0330: 1, S0380: 1, H0522: 1, S0004: 1, H0555: 1, L0611: 1, S3014: 1, S0206: 1, L0755: 1, L0758: 1, H0444: 1, L0587: 1, L0589: 1, L0605: 1, L0591: 1, L0608: 1, L0361: 1, L0366: 1, H0665: 1, S0242: 1, S0194: 1, H0543: 1, H0423: 1, S0460: 1, S0456: 1 and H0506: 1.
HKZAV72	HKZAV72R	1228	2 - 163	3403	Cys-1 to Val-33, Ala-47 to Glu-54.	
HKZAX48	HKZAX48R	1229	137 - 361	3404		L0771: 3, L0021: 1, S0036: 1, H0689: 1 and

						H0659: 1.	
HKZBB22	HKZBB22R	1230	2 - 520	3405	Arg-5 to Leu-11, Arg-32 to Lys-39, Thr-117 to Lys-122.		
HKZBS89	HKZBS89R	1231	1 - 381	3406	Gln-41 to His-48, Leu-55 to Gly-61, Pro-71 to Gly-79, Ala-104 to His-111.		
HLDQQ80	HLDQQ80R	1232	2 - 112	3407			
HLDXE19	HLDXE19R	1233	2 - 190	3408	Ala-2 to Lys-12.		
HLICD55	HLICD55R	1234	2 - 151	3409			
HLJBI32	HLJBI32R	1235	430 - 648	3410			
HLJBI37	HLJBI37R	1236	144 - 398	3411	Pro-77 to Lys-85.		
HLTHA47	HLTHA47R	1237	118 - 411	3412	Pro-82 to Lys-92.		
HLTJA50	HLTJA50R	1238	331 - 585	3413			
HLWAC95	HLWAC95R	1239	2 - 337	3414	Gln-20 to Ser-30.		
HLWDZ38	HLWDZ38R	1240	57 - 275	3415	Phe-45 to Ser-51.		
HLYDI57	HLYDI57R	1241	2 - 238	3416			
HMCFO19	HMCFO19R	1242	131 - 199	3417			
HMCIZ44	HMCIZ44R	1243	67 - 225	3418	Lys-17 to Thr-23.		
HMCJE25	HMCJE25R	1244	3 - 161	3419	Met-40 to Thr-52.		
HMSPB25	HMSPB25R	1245	324 - 145	3420			
HMVBB04	HMVBB04R	1246	136 - 276	3421	Lys-18 to Lys-30.		
HNAAE01	HNAAE01R	1247	2 - 196	3422	Lys-18 to Lys-30.		
HNBUP08	HNBUP08R	1248	127 - 474	3423	Pro-37 to Arg-46, Gln-75 to Gly-81, Pro-83 to Ser-89.	L0766: 5, L0751: 4, H0662: 2, H0253: 2, L0754: 2, L0750: 2, H0170: 1, H0587: 1, H0327: 1, H0688: 1,	

Group	Clone	No.	Range	No. 2	Variants / Mutations
HNBUY37	HNBUY37R	1249	2 - 289		H0428: 1, S0210: 1, L0763: 1, L0770: 1, L0769: 1, L0646: 1, L0662: 1, L0803: 1, L0776: 1, L0655: 1, L0658: 1, L0659: 1, L0789: 1, L0666: 1, L0663: 1, L0665: 1, H0658: 1, H0670: 1, H0660: 1, S0380: 1, L0740: 1, L0755: 1, L0758: 1, L0589: 1, L0361: 1 and S0192: 1.
				3424	L0783: 4, S0280: 2, H0662: 1, H0550: 1, L0764: 1, L0662: 1, L0809: 1 and H0684: 1.
HNBVL57	HNBVL57R	1250	179 - 541	3425	
HNHBC18	HNHBC18R	1251	1 - 279	3426	Glu-18 to Asp-35, Leu-52 to Gly-82.
HNJFE85	HNJFE85R	1252	2 - 454	3427	
HNKCO29	HNKCO29R	1253	1 - 351	3428	
HNOAA22	HNOAA22R	1254	33 - 425	3429	
HNOAB27	HNOAB27R	1255	397 - 621	3430	
HNOAB28	HNOAB28R	1256	116 - 232	3431	
HNOAB88	HNOAB88R	1257	3 - 551	3432	
HNOAC04	HNOAC04R	1258	112 - 219	3433	
HNOAC15	HNOAC15R	1259	1 - 138	3434	Thr-1 to Ser-8, Pro-22 to Ser-27.

HNOAE50	HNOAE50R	89 - 577	3435	Thr-5 to Thr-14, Arg-20 to His-25, Arg-35 to Gly-40, Lys-58 to Arg-66, His-101 to Ser-107, Arg-111 to Lys-125, Leu-131 to Glu-140.	
HNOAE65	HNOAE65R	2 - 535	3436	Pro-13 to Arg-21, Ser-42 to Phe-52, Lys-69 to Val-77, Ile-82 to Glu-87, Gly-93 to Gln-99, Val-118 to Asn-124, Lys-143 to Leu-152, Arg-154 to Glu-178.	
HNOAF22	HNOAF22R	67 - 555	3437	Thr-5 to Thr-14, Arg-20 to His-25, Arg-35 to Gly-40, Lys-58 to Arg-66, His-101 to Ser-107, Arg-111 to Lys-125, Leu-131 to Arg-139, Arg-145 to Leu-153.	
HNOAF36	HNOAF36R	2 - 145	3438	Arg-11 to Pro-17.	H0651: 2
HNOAG34	HNOAG34R	42 - 362	3439		
HNOAG94	HNOAG94R	28 - 177	3440		
HNOAH67	HNOAH67R	2 - 364	3441		
HNOAJ67	HNOAJ67R	3 - 524	3442	Cys-2 to Gly-7.	
HNOAJ76	HNOAJ76R	351 - 536	3443	Trp-6 to Glu-12.	H0134: 9, L0771: 8,

L0748: 7, L0731: 6,
L0591: 6, L0592: 6,
L0770: 5, L0747: 5,
L0749: 5, L0750: 5,
H0136: 5, H0050: 4,
H0625: 4, H0529: 4,
L0769: 4, L0752: 4,
L0758: 4, S0007: 3,
S0045: 3, H0591: 3,
H0561: 3, L0761: 3,
L0645: 3, L0766: 3,
L0655: 3, L0657: 3,
L0666: 3, H0696: 3,
H0436: 3, L0754: 3,
L0756: 3, L0755: 3,
H0543: 3, H0686: 2,
H0125: 2, S0420: 2,
S0376: 2, H0351: 2,
H0581: 2, S0049: 2,
H0052: 2, L0163: 2,
H0428: 2, H0090: 2,
H0040: 2, T0041: 2,
H0494: 2, H0646: 2,
L0763: 2, L0521: 2,
L0776: 2, L0665: 2,
H0144: 2, L0751: 2,
L0745: 2, S0031: 2,
L0581: 2, L0608: 2,
H0170: 1, H0171: 1,
H0394: 1, S0114: 1,

S0218: 1, H0656: 1, S0444: 1, S0360: 1, H0637: 1, H0580: 1, H0619: 1, H0393: 1, L0717: 1, H0497: 1, H0486: 1, T0039: 1, T0114: 1, H0013: 1, H0244: 1, H0635: 1, H0427: 1, H0318: 1, H0178: 1, L0157: 1, H0081: 1, S0051: 1, H0292: 1, S0003: 1, L0483: 1, H0316: 1, H0135: 1, H0634: 1, H0551: 1, H0560: 1, S0440: 1, H0538: 1, L0640: 1, L0796: 1, L0667: 1, L0772: 1, L0373: 1, L0764: 1, L0662: 1, L0363: 1, L0768: 1, L0649: 1, L0388: 1, L0650: 1, L0774: 1, L0775: 1, L0375: 1, L0524: 1, L0653: 1, L0659: 1, L0663: 1, L0664: 1, S0053: 1, H0520: 1, S0126: 1, H0435: 1, H0660: 1, H0672: 1, H0651: 1, H0521: 1,

HNOAK11	HNOAK11R	1269	2 - 157	3444		H0704: 1, S0044: 1, H0187: 1, S0028: 1, L0740: 1, L0779: 1, L0777: 1, L0753: 1, L0759: 1, L0596: 1, L0597: 1, L0595: 1, S0026: 1, H0217: 1 and S0384: 1.
HNOAL51	HNOAL51R	1270	43 - 207	3445		
HNOAN85	HNOAN85R	1271	1 - 180	3446		
HNOAO59	HNOAO59R	1272	403 - 759	3447	Phe-74 to Pro-81.	
HNOAO71	HNOAO71R	1273	2 - 283	3448	Gly-1 to Leu-6, Pro-47 to Asp-52, Lys-63 to Glu-68.	
HNOAP21	HNOAP21R	1274	2 - 730	3449	Arg-9 to Arg-27, Gly-43 to Lys-48, Asp-61 to Ser-67, Ala-124 to Gly-130, Thr-146 to Lys-151, Phe-165 to Lys-170.	
HNOAQ24	HNOAQ24R	1275	2 - 664	3450		L0666: 10, H0510: 8, H0046: 6, H0617: 6, S0051: 4, H0135: 4, L0776: 4, L0439: 4, H0509: 3, L0665: 3, L0747: 3, H0445: 3, H0662: 2, S0420: 2, S0222: 2, H0574: 2, H0632: 2, H0427: 2,

H0575: 2, H0618: 2,
H0253: 2, H0052: 2,
H0545: 2, H0123: 2,
H0687: 2, H0428: 2,
H0100: 2, L0662: 2,
L0806: 2, L0657: 2,
L0659: 2, L0664: 2,
H0691: 2, H0651: 2,
L0744: 2, L0592: 2,
L0599: 2, L0601: 2,
S0040: 1, S0212: 1,
H0483: 1, H0255: 1,
H0663: 1, S0354: 1,
H0208: 1, S6022: 1,
H0441: 1, H0357: 1,
H0455: 1, H0592: 1,
H0331: 1, N0009: 1,
H0013: 1, S0280: 1,
H0349: 1, H0042: 1,
S0049: 1, H0327: 1,
H0544: 1, H0178: 1,
H0012: 1, H0246: 1,
H0024: 1, H0071: 1,
H0107: 1, S6028: 1,
H0266: 1, T0023: 1,
T0006: 1, H0124: 1,
S0036: 1, H0264: 1,
H0059: 1, H0633: 1,
H0647: 1, S0142: 1,
L0369: 1, L0371: 1,

HNOAQ47	HNOAQ47R	1276	1 - 642	3451	Ser-15 to Glu-23, Val-33 to Gly-40, Arg-47 to Pro-59, Ser-64 to Phe-70, Gly-92 to Lys-97, Lys-155 to Glu-166.	L0770: 1, L0769: 1, L0645: 1, L0764: 1, L0768: 1, L0775: 1, L0651: 1, L0525: 1, L0378: 1, L0653: 1, L0518: 1, L0809: 1, L0789: 1, L0792: 1, H0520: 1, S0126: 1, H0659: 1, H0658: 1, H0672: 1, H0539: 1, H0521: 1, S0044: 1, S0028: 1, L0743: 1, L0748: 1, S0031: 1, L0485: 1, H0653: 1, H0665: 1, H0667: 1, S0192: 1 and L0698: 1.
HNOAR74	HNOAR74R	1277	122 - 400	3452	Pro-5 to Gly-11, Ser-20 to Ser-27.	L0794: 3, H0657: 2, L0766: 2, L0783: 2, L0789: 2, L0777: 2, L0759: 2, H0656: 1, S0116: 1, S0444: 1, S0360: 1, H0431: 1, S0010: 1, H0052: 1, H0596: 1, H0687: 1,

HNQAR85	HNOAR85R	1278	278 - 562	3453	Ser-48 to Leu-56, Ser-70 to Val-75, Thr-83 to Ala-92.	L0758: 6, H0031: 4, H0341: 3, S0022: 3, S0376: 2, H0586: 2, H0156: 2, H0575: 2, L0769: 2, L0803: 2, L0655: 2, L0809: 2, H0522: 2, S0027: 2, H0445: 2, S0412: 2, H0656: 1, S0358: 1, S0360: 1, H0574: 1, H0486: 1, H0013: 1, H0318: 1, H0327: 1, L0157: 1, H0015: 1, H0083: 1, S0003: 1, S0214: 1, H0039: 1, H0673: 1, H0591: 1, T0067: 1, H0412: 1, H0494: 1, H0529: 1, H0634: 1, L0637: 1, L0648: 1, L0649: 1, L0804: 1, L0774: 1, L0776: 1, L0655: 1, L0606: 1, L0809: 1, H0144: 1, H0698: 1, L0438: 1, H0690: 1, H0660: 1, H0651: 1, L0747: 1, L0749: 1, L0758: 1, L0601: 1, S0242: 1, S0196: 1 and H0543: 1.

HNOAS07	HNOAS07R	1279	84 - 521	3454	Asn-80 to Gly-86, Glu-133 to Arg-138.	L0372: 1, L0764: 1, L0794: 1, L0649: 1, L0774: 1, L0775: 1, L0651: 1, L0807: 1, L0657: 1, L0789: 1, L0663: 1, H0519: 1, S0126: 1, H0684: 1, H0660: 1, H0666: 1, H0651: 1, H0518: 1, H0521: 1, S0028: 1, L0747: 1, L0777: 1, L0731: 1, S0194: 1, H0543: 1 and S0424: 1.
HNOAS36	HNOAS36R	1280	3 - 254	3455	Leu-1 to Thr-7, Pro-39 to Ser-48, Trp-62 to Thr-68.	
HNOAS92	HNOAS92R	1281	2 - 385	3456	Pro-28 to Tyr-37, Leu-52 to Trp-57, Lys-109 to Leu-114.	H0457: 4, H0441: 3, H0393: 2, H0052: 2, H0620: 2, S0144: 2, H0521: 2, H0341: 1, S0358: 1, H0587: 1, H0632: 1, H0581: 1, H0309: 1, L0471: 1, H0622: 1, H0424: 1, H0213: 1, S0366: 1, H0163: 1, H0132: 1, S0142: 1, H0529: 1, H0547: 1, H0651: 1,

HNOAT40	HNOAT40R	1282	96 - 317	3457	
					S3014: 1, L0748: 1, L0777: 1 and L0599: 1. L0794: 5, H0052: 4, H0457: 4, L0438: 4, H0651: 4, H0581: 3, L0777: 3, S0116: 2, S0007: 2, S0222: 2, S0049: 2, N0006: 2, L0163: 2, S6028: 2, L0351: 2, H0130: 2, L0638: 2, L0803: 2, L0805: 2, L0439: 2, L0754: 2, L0750: 2, L0755: 2, H0580: 1, H0645: 1, H0486: 1, H0013: 1, S0346: 1, H0009: 1, L0157: 1, H0567: 1, H0562: 1, H0050: 1, T0010: 1, H0606: 1, H0040: 1, H0063: 1, S0210: 1, L0761: 1, L0667: 1, L0774: 1, L0526: 1, L0532: 1, L0666: 1, L0665: 1, H0658: 1, H0521: 1, H0576: 1, L0753: 1, L0758: 1, L0759: 1, L0593: 1, L0366: 1, H0543: 1 and S0462: 1.

HNOAT76	HNOAT76R	1283	2 - 187	3458		
HNOAV91	HNOAV91R	1284	2 - 439	3459	Lys-28 to Tyr-49, Arg-75 to Ala-83, Thr-90 to Ala-95, Arg-107 to Asp-114, Arg-137 to Ser-146.	
HNOBD17	HNOBD17R	1285	98 - 316	3460		
HNOBE83	HNOBE83R	1286	2 - 607	3461	Arg-1 to Gly-6, Lys-21 to Gly-29, Gln-51 to Gly-56, Pro-82 to Asp-90, Lys-175 to Ser-180.	L0747: 16, H0651: 10, H0561: 9, L0758: 8, H0046: 7, L0663: 7, S0026: 7, H0656: 6, H0393: 6, H0494: 6, L0774: 6, L0659: 6, L0665: 6, L0750: 6, L0731: 6, L0596: 6, H0543: 6, H0341: 5, H0575: 5, H0529: 5, L0662: 5, L0655: 5, H0539: 5, L0439: 5, L0752: 5, S0114: 4, H0657: 4, H0351: 4, H0581: 4, H0551: 4, H0560: 4, S0372: 4, L0769: 4, L0764: 4, L0776: 4, H0144: 4, H0660: 4, H0648: 4, H0672: 4, S0028: 4, L0749: 4, L0362: 4, H0580: 3, H0497: 3, H0486: 3, H0318: 3,

H0014: 3, H0373: 3,
H0553: 3, H0038: 3,
T0041: 3, S0002: 3,
L0761: 3, L0664: 3,
S0126: 3, H0658: 3,
H0666: 3, S0380: 3,
S0152: 3, H0521: 3,
H0707: 3, L0589: 3,
L0605: 3, L0599: 3,
L0593: 3, H0423: 3,
H0265: 2, H0661: 2,
S0356: 2, S0358: 2,
S0360: 2, S0408: 2,
S0410: 2, S0046: 2,
H0409: 2, S0280: 2,
H0251: 2, L0738: 2,
L0471: 2, H0057: 2,
L0185: 2, H0594: 2,
H0188: 2, S0003: 2,
H0090: 2, H0412: 2,
H0413: 2, S0440: 2,
S0150: 2, S0144: 2,
H0538: 2, L0763: 2,
L0627: 2, L0775: 2,
L0653: 2, H0519: 2,
H0435: 2, H0659: 2,
H0436: 2, H0478: 2,
S0027: 2, L0756: 2,
L0755: 2, L0759: 2,
H0445: 2, L0588: 2,

L0590: 2, H0542: 2,
H0422: 2, H0171: 1,
L0448: 1, H0556: 1,
H0222: 1, S0342: 1,
H0650: 1, S0035: 1,
H0483: 1, H0671: 1,
H0662: 1, H0449: 1,
H0459: 1, H0125: 1,
S0420: 1, S0354: 1,
S0444: 1, S0045: 1,
H0443: 1, H0370: 1,
H0392: 1, L0622: 1,
L0623: 1, T0040: 1,
H0013: 1, H0635: 1,
H0427: 1, H0156: 1,
H0590: 1, S0010: 1,
H0052: 1, T0110: 1,
H0597: 1, H0546: 1,
H0009: 1, H0093: 1,
S0051: 1, T0010: 1,
H0510: 1, H0267: 1,
H0687: 1, H0252: 1,
H0428: 1, H0039: 1,
H0622: 1, H0181: 1,
H0032: 1, H0068: 1,
H0598: 1, H0040: 1,
H0087: 1, T0067: 1,
H0488: 1, L0564: 1,
T0042: 1, H0625: 1,
H0130: 1, H0641: 1,

HNOBV55	HNOBV55R A	1287	111 - 506	3462	Pro-14 to Gly-22, Ile-31 to Ala-36, Lys-53 to Ile-65.	H0633: 1, S0208: 1, S0422: 1, S0426: 1, L0520: 1, L0762: 1, L0770: 1, L0796: 1, L0630: 1, L0646: 1, L0773: 1, L0766: 1, L0381: 1, L0388: 1, L0804: 1, L0650: 1, L0375: 1, L0651: 1, L0784: 1, L0656: 1, L0518: 1, L0519: 1, L0530: 1, L0368: 1, S0053: 1, S0374: 1, H0547.:1, H0689: 1, H0682: 1, H0684: 1, H0670: 1, H0518: 1, S0013: 1, H0704: 1, S0044: 1, H0214: 1, S0404: 1, S0406: 1, H0555: 1, H0576: 1, S0392: 1, L0751: 1, S0031: 1, H0444: 1, S0106: 1, S0011: 1, H0667: 1, S0192: 1, S0242: 1, S0276: 1, L0697: 1 and L0360: 1.
HNOCE63	HNOCE63R	1288	2 - 394	3463	Val-2 to Leu-20.	

HNOCL43	HNOCL43R	1289	2 - 193.	
HNOCN02	HNOCN02R	1290	1 - 624	
HNOCN10	HNOCN10R	1291	1 - 453	3464 3465 3466	H0556: 11, H0265: 9, H0012: 4, H0616: 4, H0393: 3, H0620: 3, L0163: 3, H0135: 3, S0002: 3, H0651: 3, L0596: 3, H0542: 3, H0543: 3, S0418: 2, S0045: 2, H0266: 2, S0150: 2, H0521: 2, L0591: 2, S0040: 1, H0341: 1, H0663: 1, S0354: 1, S0358: 1, S0046: 1, S0222: 1, H0586: 1, H0486: 1, H0635: 1, H0618: 1, H0581: 1, S0049: 1, H0263: 1, T0103: 1, T0110: 1, H0009: 1, T0003: 1, H0373: 1, S0051: 1, S0336: 1, H0290: 1, H0286: 1, H0328: 1, H0622: 1, H0553: 1, H0124: 1, H0090: 1, S0038: 1, H0100: 1, T0042: 1, S0015: 1, H0560: 1, H0509: 1, H0130: 1, L0654: 1, H0144: 1,

HNOCR44	HNOCR44R	1292	3 - 581	3467	Pro-1 to Lys-10, Phe-21 to Asn-27	L0438: 1, H0547: 1, H0519: 1, H0593: 1, H0435: 1, L0602: 1, S0332: 1, H0522: 1, S0434: 1, L0163: 1, H0422: 1 and S0398: 1.
HNOCR44	HNOCR44R	1292	3 - 581	3467	Pro-1 to Lys-10, Phe-21 to Asn-27	H0422: 1 and S0398: 1.
HNOCR44	HNOCR44R	1292	3 - 581	3467	Pro-1 to Lys-10, Phe-31 to Asn-37, Gln-42 to Leu-50, Arg-58 to Gln-65, Leu-86 to Ala-91, Tyr-101 to Ala-111.	
HNOCU03	HNOCU03R	1293	1 - 258	3468	Glu-1 to Asp-6.	
HNODD77	HNODD77R	1294	204 - 407	3469		
HNODG11	HNODG11R	1295	63 - 320	3470	Ser-47 to Ile-53.	
HNODM92	HNODM92R	1296	269 - 583	3471	Gly-35 to Glu-41.	
HNODP28	HNODP28R	1297	480 - 707	3472		
HNOJA93	HNOJA93R	1298	1 - 453	3473	Gly-13 to Lys-20, Ala-26 to Lys-32, Ala-83 to Leu-88, Gly-128 to Val-135, Phe-142 to Asn-151.	
HNOJB10	HNOJB10R	1299	2 - 391	3474		S0358: 7, L0750: 7, S0360: 6, H0617: 5, S0126: 4, H0545: 3,

L0776: 3, S0374: 3,
L0748: 3, L0755: 3,
L0588: 3, H0422: 3,
H0685: 2, H0549: 2,
H0550: 2, H0632: 2,
H0546: 2, H0424: 2,
H0163: 2, H0551: 2,
L0665: 2, H0593: 2,
H0660: 2, S0330: 2,
L0747: 2, L0749: 2,
L0777: 2, L0757: 2,
S0031: 2, H0556: 1,
H0686: 1, H0295: 1,
S0430: 1, H0657: 1,
H0341: 1, H0662: 1,
S0278: 1, H0282: 1,
H0592: 1, H0586: 1,
H0486: 1, T0039: 1,
T0109: 1, H0004: 1,
H0581: 1, H0309: 1,
H0596: 1, T0110: 1,
H0231: 1, H0123: 1,
H0620: 1, H0083: 1,
H0594: 1, H0687: 1,
L0483: 1, H0644: 1,
H0361: 1, H0087: 1,
H0413: 1, H0059: 1,
H0494: 1, S0306: 1,
S0440: 1, H0509: 1,
H0529: 1, L0762: 1,

HNOJB57	HNOJB57R	1300	2 - 355	3475	Arg-8 to Gln-18, Thr-24 to Gly-35, Lys-53 to Gly-61, Pro-77 to Cys-82, Pro-103 to Gln-117.	L0770: 1, L0769: 1, L0372: 1, L0764: 1, L0771: 1, L0773: 1, L0775: 1, L0375: 1, L0556: 1, L0655: 1, L0807: 1, L0656: 1, L0659: 1, L0540: 1, L0783: 1, L0384: 1, S0216: 1, H0144: 1, H0691: 1, H0690: 1, H0684: 1, H0658: 1, H0670: 1, H0672: 1, S0328: 1, S0378: 1, S0380: 1, H0518: 1, H0555: 1, S3014: 1, S0032: 1, L0741: 1, H0445: 1, L0596: 1, S0192: 1, S0194: 1, S0460: 1 and H0352: 1.
HNOJD14	HNOJD14R	1301	2 - 439	3476	---	---
HNOJF20	HNOJF20R	1302	10 - 165	3477	Leu-14 to Arg-20, Ser-29 to Ser-38, Pro-43 to Gly-52.	
HNOJG05	HNOJG05R	1303	288 - 572	3478	Ile-34 to Ala-40.	
HNOJH48	HNOJH48R	1304	2 - 283	3479	Arg-70 to Ser-78.	L0748: 17, L0749: 13,

L0666: 9, H0547: 8,
L0758: 8, S0358: 7,
S0003: 7, L0754: 7,
L0485: 7, S0280: 6,
H0038: 6, H0521: 6,
S3014: 6, L0777: 6,
L0755: 6, H0068: 5,
L0659: 5, L0665: 5,
L0744: 5, L0740: 5,
L0591: 5, H0657: 4,
H0656: 4, S0116: 4,
H0318: 4, H0266: 4,
H0687: 4, H0031: 4,
H0040: 4, S0002: 4,
S0206: 4, L0752: 4,
H0445: 4, H0542: 4,
H0423: 4, H0497: 3,
H0013: 3, H0427: 3,
H0046: 3, H0014: 3,
H0615: 3, L0142: 3,
S0036: 3, H0090: 3,
H0551: 3, S0440: 3,
L0662: 3, L0767: 3,
H0696: 3, S0027: 3,
S0028: 3, L0731: 3,
L0362: 3, S0196: 3,
H0662: 2, H0638: 2,
H0580: 2, S0045: 2,
S0222: 2, H0587: 2,
H0486: 2, H0706: 2,

S0010: 2, S0346: 2,
T0048: 2, S0474: 2,
H0581: 2, H0428: 2,
L0483: 2, H0553: 2,
S0366: 2, H0634: 2,
H0616: 2, H0412: 2,
H0623: 2, L0763: 2,
L0637: 2, L0667: 2,
L0646: 2, L0768: 2,
L0774: 2, L0657: 2,
L0663: 2, H0144: 2,
S0374: 2, H0520: 2,
H0519: 2, S0126: 2,
S0328: 2, S0146: 2,
H0555: 2, H0436: 2,
L0747: 2, L0595: 2,
S0026: 2, S0194: 2,
H0506: 2, L0600: 2,
H0170: 1, H0171: 1,
H0556: 1, T0002: 1,
H0686: 1, S0114: 1,
T0049: 1, S0001: 1,
S0282: 1, H0663: 1,
H0305: 1, S0356: 1,
S0444: 1, H0329: 1,
S0046: 1, L0717: 1,
H0411: 1, H0550: 1,
H0441: 1, H0370: 1,
H0600: 1, S0005: 1,
H0333: 1, H0331: 1,

H0574: 1, T0082: 1, H0122: 1, H0196: 1, H0050: 1, L0471: 1, H0057: 1, H0373: 1, T0010: 1, H0510: 1, H0416: 1, S0318: 1, S0316: 1, S0214: 1, H0644: 1, H0074: 1, H0165: 1, H0168: 1, H0169: 1, H0674: 1, S0364: 1, H0708: 1, H0598: 1, H0135: 1, H0163: 1, H0591: 1, H0264: 1, H0272: 1, H0488: 1, H0413: 1, H0056: 1, S0386: 1, L0370: 1, T0041: 1, S0014: 1, H0131: 1, H0130: 1, H0647: 1, S0344: 1, S0422: 1, L0598: 1, L0640: 1, L0770: 1, L0769: 1, L0761: 1, L0772: 1, L0643: 1, L0771: 1, L0773: 1, L0766: 1, L0775: 1, L0375: 1, L0651: 1, L0806: 1, L0653: 1, L0776: 1, L0655: 1, L0656: 1, L0809: 1, L0790: 1,

HNOJH52	HNOJH52R	1305	3 - 200	3480	
HNOJI82	HNOJI82R	1306	1 - 489	3481	Lys-36 to Gln-48, Gln-56 to Ser-72, Gly-82 to Val-105, Lys-114 to Lys-120, Ser-122 to Cys-133.	L0791: 1, L0664: 1, H0691: 1, H0689: 1, H0683: 1, H0435: 1, H0660: 1, H0648: 1, H0672: 1, H0539: 1, S0380: 1, H0710: 1, S0152: 1, S0013: 1, S0174: 1, H0478: 1, L0743: 1, L0750: 1, L0757: 1, S0031: 1, H0707: 1, L0588: 1, L0592: 1, L0599: 1, L0608: 1, L0604: 1, L0593: 1, H0668: 1, H0667: 1, S0192: 1, S0276: 1, H0422: 1, H0352: 1 and H0712: 1.
HNOJI85	HNOJI85R	1307	1 - 552	3482	Ala-1 to Ser-6.	L0754: 5, L0731: 4, L0748: 3, L0750: 3, H0411: 2, H0012: 2, H0687: 2, H0644: 2, L0803: 2, H0550: 1, L0021: 1, H0599: 1, L0022: 1, H0042: 1,

HNOJJ20	HNOJJ20R	1308	1 - 261	3483		H0575: 1, H0150: 1, H0620: 1, T0003: 1, H0673: 1, L0662: 1, L0650: 1, L0774: 1, L0375: 1, L0807: 1, L0515: 1, L0659: 1, L0666: 1, S0374: 1, H0694: 1, L0747: 1, L0749: 1, L0779: 1 and L0755: 1.
HNOJJ26	HNOJJ26R	1309	2 - 385	3484	Lys-19 to Asn-25, Pro-61 to Lys-66.	
HNOJK66	HNOJK66R	1310	1 - 462	3485	Ser-27 to Gly-38, Ser-63 to Trp-72, Trp-79 to Asn-84, Arg-133 to Trp-139.	L0588: 14, S0046: 13, S0045: 12, T0049: 7, H0599: 7, L0662: 7, L0599: 7, H0427: 6, T0048: 6, H0575: 5, L0747: 5, H0254: 4, H0618: 4, H0617: 4, H0124: 4, H0413: 4, H0052: 3, H0024: 3, H0553: 3, H0269: 3, H0412: 3, H0056: 3, H0623: 3, L0764: 3, L0659: 3, L0809: 3, L0666: 3, L0750: 3, L0758: 3, L0600: 3, S0001: 2, H0255: 2, H0661: 2, H0619: 2,

S6022: 2,	H0587: 2,
S0280: 2,	H0253: 2,
H0150: 2,	H0050: 2,
H0188: 2,	H0644: 2,
S0364: 2,	S0036: 2,
L0369: 2,	L0768: 2,
L0803: 2,	L0775: 2,
L0375: 2,	L0783: 2,
L0438: 2,	L0743: 2,
L0748: 2,	L0439: 2,
L0779: 2,	L0604: 2,
S6024: 1,	L0785: 1,
S0360: 1,	H0208: 1,
L0717: 1,	H0437: 1,
H0369: 1,	H0549: 1,
H0042: 1,	H0309: 1,
H0085: 1,	H0263: 1,
H0123: 1,	S0050: 1,
L0163: 1,	H0266: 1,
H0687: 1,	H0039: 1,
H0622: 1,	H0030: 1,
H0031: 1,	H0163: 1,
H0616: 1,	H0063: 1,
H0264: 1,	H0268: 1,
L0763: 1,	L0536: 1,
L0769: 1,	L0638: 1,
L0643: 1,	L0648: 1,
L0794: 1,	L0804: 1,
L0774: 1,	L0651: 1,
L0378: 1,	L0806: 1,

L0555: 1, L0634: 1, L0788: 1, L0663: 1, L0665: 1, S0044: 1, S0190: 1, L0744: 1, L0749: 1, L0731: 1, H0445: 1, L0589: 1, L0361: 1, L0366: 1 and S0458: 1.

HNOJL59	HNOJL59R	1311	204 - 479	3486	Glu-1 to Ser-9, Pro-60 to Gln-66.
HNOJM64	HNOJM64R	1312	3 - 428	3487	Gly-105 to Glu-110, Ala-133 to Tyr-142.
HNOJO55	HNOJO55R	1313	426 - 265	3488	
HNOJP42	HNOJP42R	1314	12 - 302	3489	Trp-42 to Glu-50.
HNOJQ22	HNOJQ22R	1315	1 - 510	3490	Phe-164 to Leu-170.
HNOKA20	HNOKA20R	1316	2 - 268	3491	Gln-30 to Gly-36, Lys-43 to Lys-54, Thr-73 to Ile-79.
HNOKD74	HNOKD74R	1317	2 - 85	3492	
HNOKG34	HNOKG34R	1318	1 - 510	3493	Lys-17 to Leu-27, Thr-39 to Leu-44, Asp-62 to Gly-70, Arg-89 to Asp-94, Arg-102 to Gly-113, Lys-127 to Glu-132, Thr-152 to Arg-160.
HNOKG69	HNOKG69R	1319	188 - 418	3494	
HNOKG71	HNOKG71R	1320	2 - 331	3495	Gly-8 to Ala-15, Leu-33 to His-50,

HNOKH94	HNOKH94R	1321	214 - 411	3496	Phe-59 to Gly-64, Gly-70 to Gly-84. Thr-20 to Asp-27, His-39 to Thr-44.	L0666: 11, S0358: 8, L0752: 8, L0749: 5, L0362: 5, L0771: 4, L0803: 4, L0528: 4, L0664: 4, L0740: 4, L0754: 4, L0599: 4, L0769: 3, L0662: 3, L0657: 3, L0659: 3, L0663: 3, L0748: 3, L0750: 3, L0757: 3, L0758: 3, H0171: 2, S0360: 2, H0574: 2, H0251: 2, L0483: 2, H0412: 2, H0509: 2, L0770: 2, L0774: 2, L0775: 2, L0665: 2, H0690: 2, S0330: 2, L0755: 2, L0731: 2, L0595: 2, H0624: 1, H0170: 1, H0685: 1, H0656: 1, H0663: 1, H0305: 1, H0589: 1, S0356: 1, S0354: 1, H0580: 1, S0132: 1, S0300: 1, L0717: 1, H0331: 1, H0013: 1, H0108: 1, L0105: 1, H0052: 1, H0546: 1

| HNOKI06 | HNOKI06R | 1322 | 3 - 419 | 3497 | Asp-36 to Glu-46, Gln-52 to Ile-61, Leu-76 to Lys-87, Asn-100 to Val-108, Ser-120 to Gln-128. | H0123: 1, H0024: 1, H0373: 1, H0266: 1, H0687: 1, L0142: 1, H0628: 1, H0673: 1, H0598: 1, H0038: 1, H0529: 1, L0763: 1, L0637: 1, L0761: 1, L0646: 1, L0641: 1, L0768: 1, L0804: 1, L0650: 1, L0776: 1, L0656: 1, L0526: 1, L0367: 1, S0374: 1, H0691: 1, H0519: 1, H0682: 1, H0684: 1, H0648: 1, L0602: 1, S0454: 1, L0439: 1, L0747: 1, L0779: 1, L0780: 1, L0753: 1, L0759: 1, S0434: 1, L0591: 1, L0592: 1, L0608: 1, L0366: 1, S0194: 1 and H0542: 1. S0410: 13, L0766: 5, H0657: 4, S0422: 4, H0547: 4, S0408: 3, L0758: 3, S0444: 2, H0587: 2, H0486: 2, H0013: 2, H0581: 2, L0471: 2, L0764: 2, L0794: 2, L0666: 2, |

HNOKI89	HNOKI89R	1323	2 - 370	3498	Glu-1 to Pro-7, Asp-25 to Leu-31, Arg-54 to Lys-73.	L0663: 2, H0520: 2, H0660: 2, H0436: 2, L0740: 2, L0751: 2, H0445: 2, S0436: 2, S0400: 1, H0351: 1, H0411: 1, H0632: 1, H0575: 1, S0010: 1, H0318: 1, H0596: 1, T0110: 1, H0545: 1, H0046: 1, H0567: 1, H0373: 1, S6028: 1, H0687: 1, H0031: 1, H0553: 1, H0617: 1, H0264: 1, S0386: 1, S0440: 1, H0646: 1, L0761: 1, L0646: 1, L0771: 1, L0662: 1, L0774: 1, L0805: 1, L0653: 1, L0655: 1, L0664: 1, H0519: 1, H0521: 1, H0478: 1, L0756: 1, L0752: 1, L0759: 1, S0434: 1, L0362: 1, S0192: 1 and H0543: 1.
HNOKN33	HNOKN33R	1324	57 - 284	3499	Pro-7 to Gly-20.	L0751: 9, H0556: 8, H0617: 8, L0777: 6,

L0809: 5, L0741: 5,
L0754: 5, L0779: 5,
S0222: 4, L0769: 4,
L0659: 4, L0438: 4,
L0748: 4, H0208: 3,
H0052: 3, H0009: 3,
S0051: 3, T0010: 3,
H0521: 3, L0747: 3,
L0731: 3, L0758: 3,
S0408: 2, S0476: 2,
H0575: 2, H0253: 2,
H0545: 2, H0687: 2,
H0615: 2, H0181: 2,
H0135: 2, H0494: 2,
L5566: 2, L0666: 2,
L0664: 2, L0565: 2,
H0445: 2, S6024: 1,
S0134: 1, S0001: 1,
S0282: 1, S0400: 1,
H0459: 1, S0354: 1,
S0360: 1, H0580: 1,
S0007: 1, H0639: 1,
S0278: 1, H0441: 1,
H0370: 1, H0438: 1,
S0280: 1, H0036: 1,
H0618: 1, S0049: 1,
H0196: 1, H0235: 1,
H0597: 1, H0231: 1,
H0327: 1, H0566: 1,
H0024: 1, L0163: 1,

HNOKO45	HNOKO45R	1325	67 - 171	3500		
					H0594: 1, H0424: 1, H0213: 1, H0030: 1, H0031: 1, H0598: 1, H0100: 1, L0351: 1, H0560: 1, H0625: 1, H0561: 1, H0633: 1, S0144: 1, S0002: 1, S0426: 1, L0763: 1, L0770: 1, L0772: 1, L0372: 1, L0645: 1, L0662: 1, L0767: 1, L0651: 1, L0378: 1, L0776: 1, L0657: 1, L0783: 1, L0382: 1, L0663: 1, S0052: 1, H0520: 1, H0547: 1, H0670: 1, S0378: 1, S0380: 1, H0522: 1, H0555: 1, S3014: 1, L0743: 1, L0756: 1, L0753: 1, L0759: 1, S0031: 1, S0434: 1, L0581: 1, L0595: 1, L0366: 1 and H0423: 1.	L0665: 14, L0666: 13, L0662: 10, L0659: 10, L0646: 9, L0655: 7, L0663: 7, H0648: 7, L0775: 6, L0717: 5, L0657: 5, H0436: 5,

L0756: 5, L0731: 5,
L0766: 4, L0748: 4,
S0212: 3, L0598: 3,
L0637: 3, L0761: 3,
L0664: 3, H0658: 3,
L0742: 3, L0439: 3,
L0747: 3, L0750: 3,
L0755: 3, L0758: 3,
L0604: 3, L0595: 3,
H0686: 2, L0002: 2,
S0376: 2, S0360: 2,
S6026: 2, H0351: 2,
S0222: 2, H0455: 2,
L0471: 2, H0014: 2,
T0006: 2, S0440: 2,
S0422: 2, L0667: 2,
L0641: 2, L0764: 2,
L0768: 2, L0774: 2,
L0776: 2, L0527: 2,
L0636: 2, L0783: 2,
S0374: 2, H0539: 2,
L0749: 2, L0596: 2,
L0589: 2, L0591: 2,
L0592: 2, L0599: 2,
L0594: 2, L0362: 2,
H0170: 1, S0218: 1,
H0657: 1, H0656: 1,
L0808: 1, S0400: 1,
H0402: 1, S0442: 1,
S0444: 1, S0408: 1,

H0549: 1, H0441: 1,
H0415: 1, H0587: 1,
L0622: 1, H0486: 1,
T0039: 1, H0156: 1,
H0318: 1, H0173: 1,
H0196: 1, H0597: 1,
L0041: 1, H0011: 1,
H0057: 1, H03373: 1,
H0051: 1, S0051: 1,
T0010: 1, H0399: 1,
H0061: 1, H0687: 1,
H0228: 1, L0955: 1,
H0640: 1, UNKWN: 1,
L0373: 1, L0521: 1,
L0378: 1, L0653: 1,
L0656: 1, L4669: 1,
L0661: 1, L0512: 1,
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L0661: 1, L0512: 1,
L0656: 1, L4669: 1,
L0661: 1, L0512: 1,
L0656: 1, L4669: 1,
L0661: 1, L0512: 1,
L0656: 1, L4669: 1,
L0517: 1, L0526: 1,
L0809: 1, L0647: 1,
L2269: 1, L0438: 1,
H0519: 1, H0659: 1,
H0660: 1, H0651: 1,
S0328: 1, S0380: 1,

HNOKT24	HNOKT24R	1326	98 - 457	3501	Lys-1 to Glu-6, Pro-8 to Gln-21, Ser-43 to Glu-51, Val-61 to Gly-68, Arg-75 to Pro-87, Ser-92 to Phe-98.	H0710: 1, H0579: 1, S0404: 1, S0406: 1, L0740: 1, L0754: 1, L0777: 1, L0759: 1, S0308: 1, L0605: 1, L0581: 1, L0608: 1, L0601: 1, H0543: 1, S0412: 1, S0424: 1 and H0506: 1.
HNOKU52	HNOKU52R	1327	3 - 509	3502	Lys-13 to Ser-41, Lys-57 to Lys-66, Lys-89 to Lys-97, Lys-113 to Ala-118, Pro-131 to Ala-147, Ala-159 to Ala-169.	
HNOKV82	HNOKV82R	1328	3 - 488	3503	Lys-24 to Lys-31, Gly-132 to Glu-137.	
HNOKZ03	HNOKZ03R	1329	216 - 401	3504		H0624: 10, S0192: 8, S0022: 7, S0212: 5, H0031: 4, H0412: 4, S0028: 4, L0747: 4, S0194: 4, H0717: 3, H0427: 3, L0471: 3, S0250: 3, H0039: 3,

H0644: 3, H0040: 3,
H0059: 3, H0144: 3,
H0547: 3, S0126: 3,
S0037: 3, S0027: 3,
S0206: 3, L0439: 3,
H0713: 2, H0661: 2,
S0360: 2, H0208: 2,
S0045: 2, S0046: 2,
H0587: 2, H0486: 2,
H0575: 2, H0024: 2,
H0266: 2, H0622: 2,
H0551: 2, S0210: 2,
H0520: 2, L0740: 2,
L0731: 2, L0605: 2,
H0170: 1, H0171: 1,
S0040: 1, H0716: 1,
H0294: 1, S0116: 1,
S0420: 1, S0442: 1,
H0619: 1, S0300: 1,
H0592: 1, H0586: 1,
H0485: 1, H0156: 1,
H0590: 1, S0474: 1,
S0049: 1, H0596: 1,
H0544: 1, H0045: 1,
H0012: 1, H0620: 1,
H0014: 1, T0010: 1,
H0687: 1, S0003: 1,
H0615: 1, H0030: 1,
S0364: 1, S0366: 1,
H0090: 1, H0038: 1,

HNORA56	HNORA56R	1330	2 - 595	3505	Leu-24 to Thr-39, Gln-70 to Glu-81, Arg-86 to Leu-98, Glu-104 to Pro-110, Pro-134 to Arg-157, Val-159 to Asn-166.	H0272: 1, H0334: 1, S0150: 1, L0598: 1, L0767: 1, L0766: 1, L0791: 1, L0792: 1, L0665: 1, T0068: 1, L0438: 1, H0660: 1, S3014: 1, L0744: 1, L0754: 1, L0749: 1, L0757: 1, L0759: 1, L0588: 1, L0589: 1, L0591: 1, L0592: 1, S0011: 1, H0665: 1, H0667: 1 and H0506: 1.
HNORB68	HNORB68R	1331	1 - 210	3506	Gly-1 to Ser-22, Pro-29 to Lys-70.	
HNORC14	HNORC14R	1332	2 - 499	3507		S0412: 22, L0662: 19, L0777: 14, S0010: 11, S0222: 9, S6028: 9, L0750: 9, T0010: 8, L0659: 8, L0747: 8, L0756: 8, L0663: 7, L0439: 7, H0051: 6, L0518: 6, L0754: 6, L0752: 6, S0280: 5,

H0575: 5, S0358: 4,
S0346: 4, L0753: 4,
H0170: 3, H0662: 3,
S0360: 3, H0427: 3,
L0471: 3, H0373: 3,
L0638: 3, L0637: 3,
L0764: 3, L0774: 3,
L0809: 3, L0666: 3,
S0310: 3, H0672: 3,
H0696: 3, L0731: 3,
H0506: 3, H0713: 2,
S0408: 2, H0411: 2,
H0455: 2, H0574: 2,
S0414: 2, H0486: 2,
H0036: 2, S0049: 2,
H0052: 2, H0327: 2,
H0687: 2, H0428: 2,
H0553: 2, H0644: 2,
H0038: 2, L0520: 2,
L0762: 2, L0770: 2,
L0653: 2, L0517: 2,
S0044: 2, L0442: 1,
H0583: 1, L0443: 1,
S0110: 1, S0282: 1,
S0400: 1, H0661: 1,
S0348: 1, S0356: 1,
S0444: 1, H0329: 1,
S0007: 1, H0619: 1,
S6026: 1, S0300: 1,
L0717: 1, S6022: 1,

H0550: 1, H0592: 1, H0587: 1, H0599: 1, H0042: 1, H0590: 1, H0318: 1, H0309: 1, H0545: 1, H0563: 1, H0564: 1, H0123: 1, H0019: 1, S0050: 1, L0163: 1, S0388: 1, H0356: 1, H0328: 1, H0688: 1, H0039: 1, T0023: 1, H0031: 1, H0111: 1, H0169: 1, S0364: 1, L0455: 1, H0135: 1, H0163: 1, T0067: 1, T0069: 1, T0004: 1, H0100: 1, S0112: 1, L0370: 1, L0598: 1, L0769: 1, L0630: 1, L0800: 1, L0648: 1, L0363: 1, L0768: 1, L0649: 1, L0803: 1, L0775: 1, L0375: 1, L0651: 1, L0784: 1, L0523: 1, L0805: 1, L0776: 1, L0527: 1, L0657: 1, L0635: 1, L0783: 1, L0789: 1, L0532: 1, L0664: 1, H0691: 1, T0068: 1, S0148: 1,

HNORD11	HNORD11R	1333	155 - 430			H0693: 1, H0520: 1, H0593: 1, H0689: 1, H0684: 1, S0330: 1, S0380: 1, S0174: 1, H0555: 1, L0612: 1, L0743: 1, L0748: 1, L0751: 1, L0749: 1, L0779: 1, L0759: 1, L0689: 1, S0434: 1, L0604: 1, L0366: 1, S0106: 1 and S0021: 1.
HNORE65	HNORE65R	1334	2 - 436	3508 3509	Ala-24 to Lys-29, Lys-51 to Gly-62.	H0585: 20, H0641: 14, H0521: 9, H0141: 5, H0031: 5, H0422: 5, H0644: 4, L0755: 4, H0295: 3, H0638: 3, S0376: 3, H0544: 3, S0440: 3, H0689: 3, H0690: 3, L0757: 3, H0657: 2, S0360: 2, H0586: 2, H0581: 2, H0063: 2, S0144: 2, L0662: 2, H0691: 2, H0520: 2, S0126: 2, H0522: 2, L0740: 2, L0777: 2, H0423: 2, S0298: 1, H0306: 1, S0132: 1, S0278: 1, H0549: 1, S0222: 1,

HNORF03	HNORF03R	1335	37 - 387	3510	Pro-19 to His-36, Glu-68 to Ala-86.	H0587: 1, H0333: 1, H0575: 1, H0706: 1, H0052: 1, H0309: 1, H0596: 1, H0546: 1, H0545: 1, H0086: 1, H0009: 1, H0284: 1, T0023: 1, L0143: 1, H0551: 1, H0494: 1, S0438: 1, S0002: 1, L0371: 1, L0770: 1, L0769: 1, L0667: 1, L0372: 1, L0646: 1, L0553: 1, L0771: 1, L0774: 1, L0375: 1, L0806: 1, L0382: 1, H0703: 1, H0593: 1, H0682: 1, S0328: 1, S0380: 1, H0555: 1, S0027: 1, L0742: 1, L0747: 1, L0779: 1, L0753: 1, H0445: 1 and H0543: 1.	L0439: 6, L0794: 2, L0665: 2, H0691: 2, L0717: 1, H0068: 1, L0761: 1, L0646: 1, L0773: 1, L0662: 1, L0790: 1, L0663: 1, L0438: 1, L0748: 1, L0758: 1, L0592: 1 and	—

HNORF04	HNORF04R	1336	1 - 168	3511		L0608: 1.
HNORF05	HNORF05R	1337	2 - 334	3512	Thr-2 to Phe-7, Gly-18 to Arg-23, Asp-27 to Glu-35.	
HNORF13	HNORF13R	1338	1 - 636	3513	Gly-1 to Thr-10.	
HNORH03	HNORH03R	1339	3 - 680	3514		S0358: 7, L0750: 7, S0360: 6, H0617: 5, S0126: 4, H0545: 3, L0776: 3, S0374: 3, L0748: 3, L0755: 3, L0588: 3, H0422: 3, H0685: 2, H0549: 2, H0550: 2, H0632: 2, H0546: 2, H0424: 2, H0163: 2, H0551: 2, L0665: 2, H0593: 2, H0660: 2, S0330: 2, L0747: 2, L0749: 2, L0777: 2, L0757: 2, S0031: 2, H0556: 1, H0686: 1, H0295: 1, S0430: 1, H0657: 1, H0341: 1, H0662: 1, S0278: 1, H0282: 1, H0592: 1, H0586: 1, H0486: 1, T0039: 1, T0109: 1, H0004: 1, H0581: 1, H0309: 1, H0596: 1, T0110: 1,

| HNORH05 | HNORH05R | 1340 | 1 - 498 | 3515 | Arg-13 to Arg-21, Asp-26 to Pro-35, | H0231: 1, H0123: 1, H0620: 1, H0083: 1, H0594: 1, H0687: 1, L0483: 1, H0644: 1, H0361: 1, H0087: 1, H0413: 1, H0059: 1, H0494: 1, S0306: 1, S0440: 1, H0509: 1, H0529: 1, L0762: 1, L0770: 1, L0769: 1, L0372: 1, L0764: 1, L0771: 1, L0773: 1, L0775: 1, L0375: 1, L0556: 1, L0655: 1, L0807: 1, L0656: 1, L0659: 1, L0540: 1, L0783: 1, L0384: 1, S0216: 1, H0144: 1, H0691: 1, H0690: 1, H0684: 1, H0658: 1, H0670: 1, H0672: 1, S0328: 1, S0378: 1, S0380: 1, H0518: 1, H0555: 1, S3014: 1, S0032: 1, L0741: 1, H0445: 1, L0596: 1, S0192: 1, S0194: 1, S0460: 1 and H0352: 1. |

HNORH35	HNORH35R	1341	20 - 244	3516	Glu-58 to Gly-65, Ser-74 to Pro-82, Gln-107 to Asp-115, Asp-128 to Asn-137, Gln-145 to Arg-154, Gln-161 to Ser-166.	
HNORJ08	HNORJ08R	1342	3 - 377	3517	Ala-19 to Ser-27, Ser-41 to Val-53.	
HNTRB70	HNTRB70R	1343	144 - 377	3518	Asn-95 to Leu-100.	
HOCMA02	HOCMA02RA	1344	3 - 530	3519	Pro-3 to Ile-12, Asn-20 to Glu-25.	Ile-121 to Val-129, Ala-136 to Glu-142. L0742: 10, H0144: 6, H0265: 5, S0116: 4, S0046: 4, S0222: 4, H0556: 3, H0250: 3, H0052: 3, S0027: 3, L0595: 3, S0212: 2, H0306: 2, S0358: 2, H0013: 2, H0618: 2, H0124: 2, H0100: 2, S0053: 2, H0660: 2, S0330: 2, S3012: 2, L0748: 2, L0439: 2, L0745: 2, L0757: 2, H0445: 2, S0342: 1, H0484: 1, H0638: 1, S0007: 1, H0393: 1, H0437: 1, H0549: 1, H0438: 1, H0486: 1,

HOCMB45	HOCMB45RA	1345	347 - 541	3520	Asn-39 to Gln-44, Leu-47 to Asp-55.	H0253: 1, H0390: 1, H0544: 1, H0046: 1, H0009: 1, H0023: 1, N0007: 1, T0010: 1, H0188: 1, H0687: 1, S0003: 1, H0030: 1, S0364: 1, L0455: 1, S0366: 1, H0090: 1, H0038: 1, H0551: 1, H0412: 1, H0059: 1, S0038: 1, H0130: 1, H0641: 1, S0142: 1, S0002: 1, H0517: 1, L0643: 1, L0771: 1, L0794: 1, L0766: 1, L0775: 1, L0654: 1, L0655: 1, L0352: 1, S0008: 1, H0435: 1, H0659: 1, H0658: 1, H0672: 1, H0521: 1, H0522: 1, S0044: 1, H0576: 1, L0779: 1, L0605: 1, L0593: 1, S0026: 1, H0667: 1, S0276: 1, S0196: 1, H0542: 1, H0423: 1 and H0506: 1. L0439: 17, L0438: 6, H0424: 5, S0007: 4, L0769: 4, H0213: 3,

| HOCMB65 | HOCMB65R A | 1346 | 241 - 456 | 3521 | L0776: 3, H0660: 3, H0309: 2, S0051: 2, L0789: 2, L0663: 2, L0750: 2, L0757: 2, L0759: 2, S0196: 2, S0040: 1, S0001: 1, H0662: 1, H0402: 1, L0005: 1, S0356: 1, H0052: 1, H0596: 1, H0009: 1, T0010: 1, L0483: 1, T0006: 1, H0033: 1, H0031: 1, H0169: 1, H0634: 1, H0538: 1, L0638: 1, L0643: 1, L0764: 1, L0768: 1, L0803: 1, L0804: 1, L0375: 1, L0606: 1, L0659: 1, L0791: 1, L0352: 1, H0547: 1, L0602: 1, H0436: 1, L0742: 1, L0749: 1, L0777: 1, L0752: 1, L0731: 1, L0758: 1, S0394: 1, L0596: 1 and S0412: 1. | |
| HOCMC08 | HOCMC08R | 1347 | 1 - 426 | 3522 | | Lys-18 to Tyr-31, Ile-45 to Asp-50, Trp-78 to Ser-88, |

| HOCMF06 | HOCMF06R | 1348 | 382 - 588 | 3523 | Pro-102 to Pro-109. | |
| HOCMF27 | HOCMF27R | 1349 | 3 - 395 | 3524 | Glu-1 to Ile-6, Asp-125 to Pro-131. | L0748: 26, H0046: 18, H0510: 7, H0673: 7, L0803: 7, H0169: 6, H0144: 6, L0731: 4, H0574: 3, H0521: 3, H0370: 2, H0615: 2, H0032: 2, T0067: 2, H0509: 2, S0210: 2, L0776: 2, L0749: 2, L0750: 2, L0595: 2, H0170: 1, H0656: 1, H0341: 1, H0151: 1, S0046: 1, S0132: 1, H0619: 1, H0351: 1, S0222: 1, H0497: 1, H0632: 1, H0486: 1, H0156: 1, H0575: 1, H0052: 1, H0596: 1, H0057: 1, H0014: 1, H0355: 1, H0286: 1, H0622: 1, H0165: 1, H0674: 1, H0212: 1, H0038: 1, H0379: 1, H0059: 1, T0041: 1, S0448: 1, H0132: 1, S0150: 1, L0646: 1, L0774: 1, L0527: 1, L0809: 1, L0657: 1, |

HOCMF50	HOCMF50RB	1350	49 - 354	3525	Gly-2 to Lys-9, Arg-21 to Glu-32, Pro-58 to Lys-64, Thr-73 to Glu-83.	L0519: 1, L0788: 1, L0789: 1, L0666: 1, H0520: 1, H0519: 1, H0658: 1, H0660: 1, S0152: 1, S0013: 1, H0696: 1, S0044: 1, S0174: 1, S0146: 1, H0479: 1, L0744: 1, L0777: 1, L0758: 1, L0581: 1, L0608: 1, L0593: 1 and H0136: 1.
						H0687: 1, L0663: 1 and H0660: 1.
HOCMF54	HOCMF54R	1351	37 - 285	3526	Lys-1 to Thr-6, Ala-26 to Gly-36, Ser-47 to Gln-55, Leu-72 to Cys-83.	L0794: 7, L0666: 4, L0750: 3, L0664: 2, L0665: 2, H0670: 2, H0660: 2, L0439: 2, L0751: 2, L0756: 2, H0650: 1, H0150: 1, L0769: 1, L0803: 1, L0378: 1, L0657: 1, H0684: 1 and H0555: 1.
HOCMG37	HOCMG37R	1352	1 - 456	3527	Gly-1 to Asn-9, Glu-31 to Val-39.	H0657: 13, S0360: 12, S0026: 7, H0547: 6, H0171: 4, S0356: 4, H0551: 4, H0560: 4, H0509: 4, H0689: 4, H0543: 4, S0358: 3,

H0318: 3, S0440: 3, H0529: 3, H0435: 3, H0665: 3, H0170: 2, H0265: 2, H0556: 2, H0222: 2, S0376: 2, L0717: 2, H0642: 2, H0574: 2, H0575: 2, H0596: 2, S0003: 2, H0615: 2, H0428: 2, H0617: 2, H0413: 2, H0494: 2, H0646: 2, L0369: 2, H0144: 2, H0520: 2, H0519: 2, H0690: 2, H0658: 2, H0660: 2, H0672: 2, L0362: 2, H0542: 2, H0423: 2, H0686: 1, H0650: 1, H0656: 1, S0212: 1, S0029: 1, H0483: 1, H0663: 1, H0664: 1, H0638: 1, S0420: 1, H0580: 1, S0278: 1, H0261: 1, H0438: 1, H0586: 1, T0060: 1, H0069: 1, S0010: 1, H0263: 1, H0327: 1, H0546: 1, H0014: 1, H0083: 1, H0510: 1, S6028: 1, H0266: 1, S0214: 1,

HOCMI62	HOCMI62R	1353	49 - 348	3528		H0553: 1, H0068: 1, H0090: 1, H0040: 1, H0634: 1, T0067: 1, H0079: 1, H0561: 1, L0065: 1, H0130: 1, H0647: 1, S0422: 1, L0772: 1, L0648: 1, L0662: 1, L0768: 1, L0375: 1, L0657: 1, L0659: 1, L0518: 1, S0310: 1, L0438: 1, H0670: 1, H0648: 1, S0380: 1, H0521: 1, H0436: 1, L0439: 1, L0749: 1, L0756: 1, L0779: 1, L0731: 1, H0343: 1, L0596: 1, L0588: 1, L0590: 1, L0591: 1, L0603: 1, H0653: 1, S0196: 1, H0422: 1, S0424: 1, S0384: 1 and H0506: 1.
HOCMJ47	HOCMJ47R	1354	1 - 510	3529	Lys-23 to Ser-29, Tyr-55 to His-62, Tyr-65 to Leu-71.	
HOCMK20	HOCMK20R	1355	14 - 400	3530	Glu-32 to Ser-38.	
HOCML06	HOCML06R	1356	3 - 707	3531	Gly-1 to Arg-9.	
HOCML66	HOCML66R	1357	2 - 289	3532		L0748: 2, S6028: 1, H0682: 1, H0660: 1,

HOCMM52	HOCMM52R	1358	130 - 594	3533		S0378: 1 and H0506: 1.
HOCMO50	HOCMO50R	1359	3 - 425	3534	Thr-19 to Cys-25, Lys-133 to Ala-138.	
HOCMS75	HOCMS75R	1360	3 - 500	3535		H0295: 8, H0617: 7, L0665: 7, H0435: 7, H0592: 6, H0494: 6, L0439: 6, L0751: 6, S0360: 5, S0046: 4, H0587: 4, H0012: 4, H0264: 4, L0662: 4, S0406: 4, H0586: 3, H0620: 3, H0031: 3, H0551: 3, S0440: 3, S0002: 3, L0763: 3, L0648: 3, L0649: 3, L0774: 3, L0659: 3, H0520: 3, H0547: 3, H0689: 3, H0660: 3, S0328: 3, S0330: 3, L0748: 3, L0754: 3, L0750: 3, H0294: 2, H0650: 2, H0341: 2, S0356: 2, S0132: 2, H0370: 2, H0333: 2, H0643: 2, L0623: 2, H0706: 2, H0081: 2, H0039: 2, H0553: 2, H0181: 2, H0068: 2, H0135: 2, H0040: 2,

H0646: 2, L0640: 2, L0637: 2, L0641: 2, L0764: 2, L0804: 2, L0806: 2, L0776: 2, L0657: 2, L0809: 2, L0664: 2, H0519: 2, H0682: 2, H0670: 2, H0672: 2, L0744: 2, L0740: 2, S0434: 2, H0677: 2, H0483: 1, H0305: 1, H0638: 1, S0442: 1, S0358: 1, S0376: 1, S0410: 1, H0411: 1, H0550: 1, H0455: 1, H0600: 1, H0101: 1, H0575: 1, H0590: 1, H0618: 1, H0052: 1, H0234: 1, H0597: 1, H0121: 1, L0041: 1, H0123: 1, H0246: 1, H0290: 1, H0292: 1, H0428: 1, H0622: 1, T0023: 1, H0030: 1, H0316: 1, H0059: 1, H0100: 1, S0306: 1, T0090: 1, H0649: 1, S0210: 1, S0426: 1, L0646: 1, L0765: 1, L0771: 1, L0626: 1, L0768: 1,

| HOCMS87 | HOCMS87R | 1361 | 145 - 636 | 3536 | Pro-84 to Pro-91. | L0364: 1, L0766: 1, L0375: 1, L0651: 1, L0378: 1, L0653: 1, L0655: 1, L0558: 1, L0635: 1, L0518: 1, L0383: 1, L0792: 1, L0663: 1, S0006: 1, H0696: 1, S0044: 1, S3014: 1, L0743: 1, L0752: 1, L0755: 1, L0731: 1, L0759: 1, H0216: 1, H0543: 1, S0424: 1 and H0506: 1. L0743: 9, H0551: 5, H0645: 4, H0050: 4, S0250: 4, S0192: 4, H0624: 3, T0039: 3, H0087: 3, H0547: 3, L0439: 3, H0294: 2, H0370: 2, T0040: 2, H0620: 2, H0024: 2, H0622: 2, H0424: 2, H0031: 2, H0063: 2, L0662: 2, L0776: 2, S0028: 2, L0757: 2, S0242: 2, S0116: 1, H0484: 1, H0483: 1, S0360: 1, H0619: 1, H0550: 1, H0586: 1, H0497: 1, H0486: 1, |

HOCMX29	HOCMX29R	1362	86 - 235	3537		H0599: 1, H0575: 1, H0122: 1, H0706: 1, H0421: 1, S0049: 1, H0086: 1, H0123: 1, H0081: 1, H0012: 1, H0687: 1, H0028: 1, H0604: 1, S0386: 1, L0772: 1, L0648: 1, L0803: 1, L0774: 1, L0375: 1, L0789: 1, L0532: 1, L0663: 1, T0068: 1, S0126: 1, H0684: 1, H0660: 1, S0152: 1, S0027: 1, L0747: 1, L0749: 1, L0779: 1, L0777: 1, S0194: 1 and H0506: 1.
HOCMY53	HOCMY53R	1363	76 - 354	3538	Glu-1 to Gly-6, Leu-27 to Val-40, Glu-60 to Asn-67.	
HOCMY61	HOCMY61R	1364	2 - 466	3539		
HOCMY79	HOCMY79R	1365	314 - 511	3540	Gly-17 to Arg-42, Phe-56 to Ser-66.	
HOCOC38	HOCOC38R	1366	394 - 2	3541		
HOCOC41	HOCOC41R	1367	520 - 789	3542	Lys-1 to His-6.	
HOCOC94	HOCOC94R	1368	3 - 488	3543	Lys-7 to Glu-13, Gly-39 to Thr-44, Gly-82 to Ile-89, Glu-98 to Asn-105.	L0777: 14, L0731: 10, L0740: 8, L0439: 7, L0754: 6, S0222: 5, H0144: 5, L0745: 5,

H0013: 4, L0770: 4,
S0380: 4, L0748: 4,
L0758: 4, H0171: 3,
H0599: 3, S0010: 3,
H0052: 3, S0003: 3,
H0615: 3, L0598: 3,
L0666: 3, L0665: 3,
H0519: 3, H0658: 3,
L0749: 3, H0255: 2,
S0376: 2, S0444: 2,
S0360: 2, H0632: 2,
H0327: 2, S0214: 2,
H0038: 2, H0040: 2,
L0769: 2, L0638: 2,
L0662: 2, L0794: 2,
L0775: 2, L0776: 2,
H0660: 2, S0330: 2,
L0744: 2, L0750: 2,
L0756: 2, L0757: 2,
L0362: 2, L0361: 2,
H0170: 1, H0685: 1,
S0040: 1, S0342: 1,
H0716: 1, S0001: 1,
S0282: 1, H0662: 1,
S0356: 1, S0358: 1,
H0675: 1, S0408: 1,
H0580: 1, S0300: 1,
H0406: 1, S0278: 1,
H0550: 1, H0441: 1,
H0431: 1, H0600: 1,

H0331: 1, H0574: 1,
T0039: 1, H0156: 1,
S0665: 1, S0346: 1,
H0263: 1, H0596: 1,
H0546: 1, H0150: 1,
H0009: 1, H0569: 1,
L0471: 1, H0012: 1,
H0051: 1, S0051: 1,
T0010: 1, H0266: 1,
S0250: 1, S0022: 1,
H0428: 1, H0119: 1,
H0553: 1, H0628: 1,
H0617: 1, H0316: 1,
H0634: 1, H0412: 1,
H0413: 1, H0623: 1,
H0494: 1, S0450: 1,
H0130: 1, S0142: 1,
UNKWN: 1, L0771: 1,
L0766: 1, L0803: 1,
L0804: 1, L0774: 1,
L0784: 1, L0805: 1,
L0652: 1, L0653: 1,
L0655: 1, L0606: 1,
L0527: 1, L0783: 1,
L0663: 1, H0547: 1,
H0689: 1, H0670: 1,
H0648: 1, H0539: 1,
H0521: 1, H0696: 1,
H0478: 1, S0432: 1,
H0540: 1, S0028: 1,

HOCOF35	HOCOF35R	1369	221 - 502	3544	Pro-6 to Arg-12, Gln-17 to Leu-22, His-25 to Asp-32, Gly-62 to Lys-69.	S0206: 1, L0746: 1, L0747: 1, S0031: 1, L0689: 1, S0436: 1, S0194: 1, S0276: 1, S0412: 1, H0506: 1 and H0352: 1.
HOCOF50	HOCOF50R	1370	2 - 409	3545	Thr-16 to Phe-28, Cys-58 to Ser-69, Glu-91 to Glu-99, Lys-113 to Gln-119.	
HOCOO62	HOCOO62R	1371	9 - 539	3546	Gln-37 to Trp-44, Arg-47 to Phe-57, Phe-67 to Ala-83, Pro-94 to Gly-99, Lys-109 to Cys-116, Arg-130 to Ser-137.	
HOCOP52	HOCOP52R	1372	2 - 382	3547		
HOCOQ13	HOCOQ13R	1373	46 - 492	3548	Glu-1 to Val-9.	H0521: 5, S0040: 3, H0039: 3, H0657: 2, H0341: 2, H0553: 2, S0210: 2, H0593: 2, H0445: 2, L0596: 2, S0212: 1, H0661: 1, S0418: 1, S0354: 1, S0358: 1, H0592: 1, T0039: 1, H0635: 1,

HOCOQ93	HOCOQ93R	1374	448 - 639	3549		H0427: 1, H0544: 1, H0546: 1, H0545: 1, H0046: 1, L0471: 1, H0083: 1, S6028: 1, S0338: 1, S0003: 1, H0068: 1, H0038: 1, H0063: 1, H0551: 1, H0100: 1, T0042: 1, H0494: 1, H0561: 1, H0646: 1, L0800: 1, L0649: 1, L0654: 1, L0666: 1, H0660: 1, H0518: 1, S0152: 1, S0146: 1, H0555: 1, S0037: 1, S0028: 1, L0605: 1, L0599: 1, L0603: 1, H0667: 1, H0542: 1, H0543: 1, S0424: 1 and H0506: 1.
HOCOT70	HOCOT70R	1375	2 - 412	3550		
HOCOV29	HOCOV29R	1376	107 - 268	3551	Lys-9 to Asp-16, Thr-27 to Trp-36.	
HOCPF69	HOCPF69R	1377	1 - 573	3552		
HOCPG38	HOCPG38R	1378	1 - 183	3553	Pro-38 to Gln-43.	H0046: 5, H0144: 5, L0665: 4, L0662: 3, L0766: 3, L0750: 3, L0779: 3, L0759: 3, H0170: 2, S0376: 2, H0329: 2, H0427: 2,

L0770: 2, L0529: 2,
L0439: 2, L0740: 2,
L0751: 2, L0758: 2,
S0242: 2, H0223: 1,
H0685: 1, S0116: 1,
S0282: 1, H0662: 1,
S6022: 1, H0574: 1,
H0486: 1, H0013: 1,
H0098: 1, H0575: 1,
H0581: 1, H0052: 1,
L0471: 1, H0024: 1,
H0510: 1, H0594: 1,
H0328: 1, H0169: 1,
H0598: 1, H0163: 1,
H0646: 1, L0637: 1,
L0768: 1, L0794: 1,
L0804: 1, L0775: 1,
L0653: 1, L0659: 1,
L0526: 1, L0783: 1,
L0809: 1, L0544: 1,
L0647: 1, L0666: 1,
L0664: 1, S0374: 1,
L0438: 1, H0519: 1,
H0670: 1, H0660: 1,
H0648: 1, S0378: 1,
H0696: 1, S0432: 1,
L0777: 1, L0755: 1,
S0308: 1, L0591: 1,
L0608: 1, S0192: 1,
S0194: 1, H0543: 1,

						H0423: 1 and S0412: 1.
HOCPG48	HOCPG48R	1379	39 - 185	3554		
HOCPH40	HOCPH40R	1380	2 - 217	3555	Leu-9 to Val-14, Glu-41 to Ala-49.	L0731: 7, S0358: 6, L0439: 6, L0769: 5, L0809: 4, L0747: 4, S0354: 3, H0580: 3, H0438: 3, H0581: 3, L0770: 3, L0766: 3, L0774: 3, L0775: 3, L0740: 3, L0749: 3, L0758: 3, L0596: 3, H0677: 3, H0392: 2, H0457: 2, L0471: 2, H0510: 2, H0169: 2, H0551: 2, T0042: 2, H0494: 2, S0438: 2, L0761: 2, L0657: 2, L0783: 2, L0647: 2, L0666: 2, L0565: 2, L0438: 2, H0521: 2, L0748: 2, L0750: 2, L0779: 2, L0752: 2, L0759: 2, L0588: 2, L0605: 2, L0592: 2, L0581: 2, L0615: 1, S0116: 1, H0638: 1, S0418: 1, S0444: 1, S0360: 1, S0222: 1, H0586: 1, H0427: 1, H0618: 1, H0390: 1,

HOCPH44	HOCPH44R	1381	3 - 281	3556	Gly-18 to Asp-23, Gln-34 to Gly-40, Asp-81 to Lys-87.	H0318: 1, H0007: 1, H0052: 1, H0544: 1, H0024: 1, H0014: 1, H0083: 1, H0375: 1, S6028: 1, H0266: 1, H0398: 1, L0055: 1, H0135: 1, H0087: 1, S0344: 1, S0426: 1, H0529: 1, L0763: 1, L0639: 1, L0374: 1, L0764: 1, L0662: 1, L0768: 1, L0803: 1, L0378: 1, L0776: 1, L0659: 1, L0518: 1, L0663: 1, L0665: 1, S0374: 1, H0547: 1, H0519: 1, H0593: 1, H0690: 1, H0682: 1, H0660: 1, S0328: 1, H0539: 1, H0555: 1, L0743: 1, L0777: 1, H0445: 1, L0362: 1, S0242: 1 and H0543: 1.
HOCPI28	HOCPI28R	1382	3 - 245	3557		
HOCPI53	HOCPI53R	1383	2 - 232	3558	Asp-43 to Gly-48.	
HOCPL59	HOCPL59R	1384	285 - 530	3559		
HOCPM39	HOCPM39R	1385	2 - 136	3560		

HOCPP65	HOCPP65R	1386	3 - 275	3561	Ala-2 to Ala-9.	L0747: 10, L0805: 6, S0358: 4, L0775: 4, L0655: 4, L0749: 4, H0656: 3, S0440: 3, L0803: 3, L0776: 3, L0789: 3, H0650: 2, H0662: 2, L0471: 2, H0620: 2, H0169: 2, H0616: 2, L0770: 2, L0769: 2, L0761: 2, L0800: 2, L0794: 2, L0804: 2, L0806: 2, L0657: 2, L0809: 2, L0665: 2, H0547: 2, S0126: 2, H0660: 2, H0648: 2, H0521: 2, S0406: 2, L0748: 2, L0750: 2, L0758: 2, L0581: 2, T0002: 1, H0686: 1, H0657: 1, S0418: 1, S0420: 1, S0356: 1, S0442: 1, S0444: 1, H0574: 1, H0559: 1, H0486: 1, L0586: 1, T0114: 1, H0250: 1, H0318: 1, H0014: 1, H0051: 1, H0266: 1, H0292: 1, H0428: 1, H0031: 1, H0673: 1, H0163: 1,

HOCPP80	1387	HOCPP80R	3 - 587	3562		H0591: 1, H0494: 1, L0640: 1, L0763: 1, L0772: 1, L0773: 1, L0521: 1, L0766: 1, L0774: 1, L0375: 1, L0384: 1, L0793: 1, H0144: 1, H0703: 1, S0374: 1, H0593: 1, H0690: 1, H0659: 1, H0658: 1, S0328: 1, S0152: 1, L0744: 1, L0779: 1, L0752: 1, L0755: 1, L0731: 1, L0759: 1, S0026: 1, H0136: 1, H0542: 1 and H0422: 1.
HOCPQ24	1388	HOCPQ24R	26 - 358	3562	Glu-16 to Lys-21, Asn-62 to Arg-68, Asp-94 to Thr-102, Gly-161 to Leu-170.	
HOCPQ59	1389	HOCPQ59R	2 - 394	3563		
				3564	Ser-9 to Glu-16, Phe-49 to Tyr-58, Asn-102 to Gly-110.	L0754: 4, H0290: 2, L0761: 2, L0794: 2, L0766: 2, L0793: 2, L0731: 2, L0758: 2, L0759: 2, L0594: 2, H0713: 1, H0402: 1, S0418: 1, S0354: 1, H0580: 1, L0717: 1, H0550: 1, H0333: 1,

HOCPQ66	HOCPQ66R	1390	2 - 427	3565	Asp-24 to Leu-31, Ile-123 to Gln-128.	H0643: 1, H0574: 1, S0280: 1, H0618: 1, H0052: 1, H0546: 1, H0545: 1, H0014: 1, H0033: 1, H0100: 1, L5566: 1, L0773: 1, L0521: 1, L0803: 1, L0804: 1, L0807: 1, L0788: 1, H0670: 1, H0660: 1, H0521: 1, S0404: 1, S0406: 1, H0436: 1, L0779: 1, H0543: 1 and H0352: 1.
HOCPQ75	HOCPQ75R	1391	2 - 487	3566		
HOCPR01	HOCPR01R	1392	3 - 536	3567	Ser-11 to Trp-18, Glu-43 to Leu-50, Phe-99 to Arg-120, Ser-136 to Tyr-144, Glu-154 to Cys-163.	
HOCPR29	HOCPR29R	1393	1 - 588	3568	Gln-14 to Lys-19, Glu-79 to Gly-87.	L0748: 9, H0556: 8, L0769: 5, L0766: 4, L0776: 4, H0547: 4, H0521: 4, L0750: 4, L0752: 4, L0758: 4, S0434: 4, H0542: 4, H0657: 3, S0418: 3, H0586: 3, H0587: 3, H0013: 3, H0052: 3.

H0083: 3, H0038: 3,
H0634: 3, H0494: 3,
S0440: 3, L0774: 3,
L0775: 3, L0659: 3,
H0522: 3, L0744: 3,
L0749: 3, L0755: 3,
L0759: 3, H0543: 3,
S0358: 2, S0476: 2,
H0156: 2, H0194: 2,
L0471: 2, H0014: 2,
H0201: 2, S0003: 2,
T0023: 2, H0135: 2,
H0551: 2, S0142: 2,
L0372: 2, L0662: 2,
L0767: 2, L0381: 2,
L0383: 2, L0666: 2,
L0665: 2, H0658: 2,
H0660: 2, S0044: 2,
S3014: 2, L0751: 2,
L0754: 2, L0596: 2,
L0588: 2, L0591: 2,
L0592: 2, L0595: 2,
L0601: 2, H0423: 2,
S0040: 1, S0134: 1,
S0298: 1, H0661: 1,
H0664: 1, H0125: 1,
S0420: 1, S0356: 1,
S0354: 1, S0444: 1,
S0360: 1, H0619: 1,
H0393: 1, H0549: 1,

H0550: 1, S0222: 1, S6014: 1, H0431: 1, H0592: 1, H0574: 1, T0039: 1, T0114: 1, H0075: 1, H0427: 1, H0590: 1, H0004: 1, H0318: 1, H0581: 1, H0251: 1, H0596: 1, T0115: 1, H0009: 1, H0081: 1, H0050: 1, H0024: 1, T0010: 1, H0687: 1, H0288: 1, H0290: 1, H0039: 1, H0622: 1, L0055: 1, H0032: 1, H0090: 1, H0591: 1, H0040: 1, H0063: 1, H0413: 1, T0069: 1, S0438: 1, H0538: 1, S0210: 1, S0426: 1, H0529: 1, L0520: 1, L0762: 1, L0763: 1, L0770: 1, L0374: 1, L0764: 1, L0768: 1, L0386: 1, L0803: 1, L0524: 1, L0806: 1, L0379: 1, L0527: 1, L0657: 1, L0382: 1, L0809: 1, L0788: 1, L0663: 1, S0052: 1, S0374: 1,

HOCPR33	HOCPR33R	1394	168 - 335	3569		H0691: 1, H0682: 1, H0435: 1, H0659: 1, S0328: 1, S0330: 1, S0152: 1, H0436: 1, L0611: 1, S0027: 1, S0028: 1, L0747: 1, L0779: 1, L0780: 1, L0731: 1, L0608: 1, S0026: 1, H0653: 1, S0192: 1, S0194: 1, H0422: 1 and S0384: 1.
HOCPR53	HOCPR53R	1395	62 - 256	3570	Glu-22 to Glu-30, Lys-42 to Glu-51.	
HOCPR55	HOCPR55R	1396	3 - 440	3571	Pro-7 to Ser-36, Cys-49 to Pro-57, Pro-85 to Ala-91, Gly-97 to Pro-109.	L0766: 2, H0660: 2, L0748: 2, L0740: 2, H0328: 1, L0769: 1, L0651: 1, L0653: 1, H0593: 1 and S0126: 1.
HOCPR77	HOCPR77R	1397	1 - 279	3572		
HOCPR82	HOCPR82R	1398	1 - 102	3573		
HOCPS35	HOCPS35R	1399	3 - 203	3574	Tyr-1 to Gly-39, Ala-41 to Tyr-67.	
HOCPU03	HOCPU03R	1400	1 - 225	3575		
HOCPU30	HOCPU30R	1401	333 - 560	3576		
HOCPU68	HOCPU68R	1402	3 - 269	3577	Ser-49 to Asp-56; Arg-64 to Ile-71, Pro-80 to Ile-89.	
HOCPV29	HOCPV29R	1403	339 - 599	3578	His-10 to Asp-20,	H0620: 2, S0022: 2,

| HOCPV67 | HOCPV67R | 1404 | 1 - 390 | 3579 | Asn-27 to Gly-33. | L0438: 2, T0002: 1, H0393: 1, H0370: 1, H0050: 1, H0373: 1, H0051: 1, H0028: 1, S0036: 1, H0551: 1, H0059: 1, S0150: 1, L0662: 1, S0126: 1, H0435: 1, H0660: 1, S0044: 1 and H0694: 1. | L0803: 7, L0439: 5, L0809: 4, L0749: 4, L0776: 3, H0520: 3, L0748: 3, L0750: 3, H0543: 3, S0440: 2, L0794: 2, L0804: 2, L0438: 2, H0547: 2, H0660: 2, S0406: 2, L0743: 2, L0777: 2, L0759: 2, H0556: 1, H0656: 1, S0358: 1, S0360: 1, H0637: 1, H0580: 1, H0741: 1, H0733: 1, H0619: 1, H0415: 1, H0600: 1, H0587: 1, H0486: 1, H0013: 1, H0427: 1, S0474: 1, H0581: 1, H0263: 1, H0457: 1, H0615: 1, H0428: 1, H0644: 1, H0032: 1, |

HOCPV72	HOCPV72R	1405	3 - 209	3580	S0036: 1, H0591: 1, H0634: 1, H0264: 1, S0438: 1, S0422: 1, S0002: 1, L0520: 1, L0766: 1, L0649: 1, L0650: 1, L0774: 1, L0775: 1, L0655: 1, L0790: 1, L0666: 1, L0663: 1, H0723: 1, H0593: 1, H0682: 1, H0670: 1, H0521: 1, S0013: 1, H0631: 1, S0206: 1, L0756: 1, L0731: 1, L0608: 1, S0194: 1 and S0424: 1.
HOCPW56	HOCPW56R	1406	2 - 502	3581	Ile-53 to Trp-63, Ala-80 to Gly-89, Arg-134 to Gln-139.	L0752: 19, L0747: 12, L0776: 6, L0750: 5, L0608: 5, L0774: 4, L0805: 4, L0438: 4, L0740: 4, S0210: 3, L0600: 3, S0358: 2, S0222: 2, H0068: 2, H0040: 2, H0413: 2, L0770: 2, L0769: 2, L0772: 2, L0794: 2, L0783: 2, L0809: 2, S0328: 2, L0439: 2, L0745: 2, L0755: 2, L0758: 2, L0590: 2,

H0170: 1, H0341: 1, H0483: 1, S0420: 1, S0410: 1, S0300: 1, H0411: 1, H0549: 1, L0622: 1, H0013: 1, H0156: 1, S0010: 1, H0052: 1, H0545: 1, N0006: 1, L0471: 1, H0012: 1, S0336: 1, H0428: 1, T0006: 1, H0606: 1, H0674: 1, L0455: 1, S0036: 1, H0038: 1, H0063: 1, H0494: 1, H0560: 1, L0520: 1, L0762: 1, L0521: 1, L0662: 1, L0767: 1, L0803: 1, L0653: 1, L0659: 1, L0790: 1, L0791: 1, L0666: 1, H0144: 1, S0374: 1, H0689: 1, H0690: 1, H0659: 1, H0660: 1, H0648: 1, S0378: 1, H0134: 1, H0214: 1, L0749: 1, L0731: 1, L0361: 1, S0106: 1, S0011: 1, H0653: 1, S0192: 1, S0242: 1, S0194: 1 and H0422: 1.